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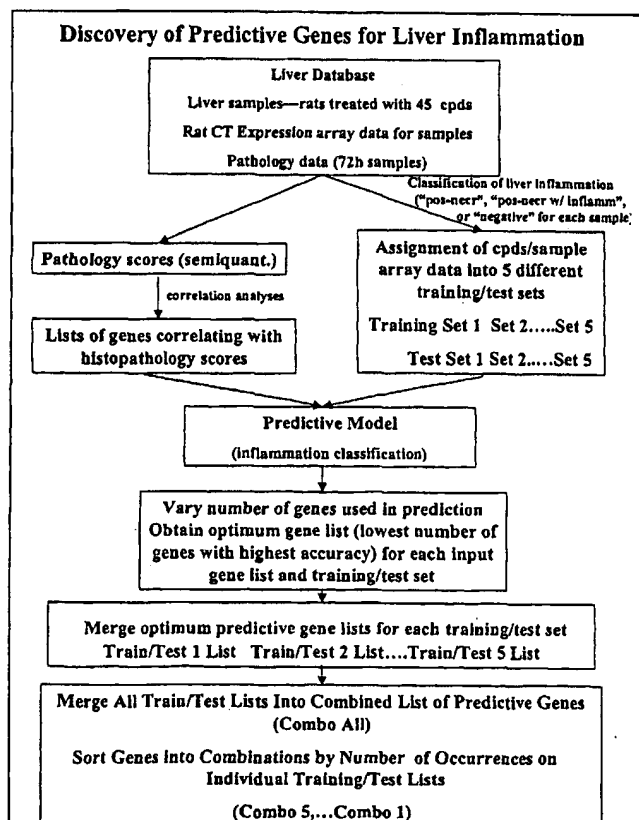
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(54) Title: LIVER INFLAMMATION PREDICTIVE GENES



(57) Abstract: The invention provides toxicity predictive genes that can be used to predict toxicity in response to one more agents. The invention provides for a method of predicting the liver toxicity In Vivo or In Vitro to an agent. The method comprises obtaining a biological sample from an individual, cell culture or explant treated with the agent. The expression of one or more liver toxicity predictive genes in the sample is measured, wherein the genes are selected from a group consisting of partial gene sequences of genes identified as responsive to agents causing liver inflammation. The process generates a test expression profile. The test expression profile is used with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

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SPECIFICATION

LIVER INFLAMMATION PREDICTIVE GENES

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Cross Reference to Other Patent Applications

This application claims the benefit of U.S. Provisional application No. 60/379,831 and filed 05/10/02, which is incorporated herein by reference in its entirety.

Reference to a Sequence Listing and Tables

Description of Accompanying CD-ROM (37 C.F.R. §§ 1.52 & 1.58): Tables 26, 28, 29, and 30 referred to herein are filed herewith on CD-ROM in accordance with 37 C.F.R. §§ 1.52 and 1.58. Two identical copies (marked "Copy 1" and "Copy 2") of said CD-ROM, both of which contain Tables 26, 28, 29, and 30, are submitted herewith, for a total of two CD-ROM discs submitted. Table 26 is recorded on said CD-ROM discs as "Table26.txt" created April 25, 2002 size 288,877 bytes. Table 28 is recorded on said CD-ROM discs as "Table28.txt" created on May 6, 2002, size 634,567 bytes. Table 29 is recorded on said CD-ROM discs as "Table29.txt" created on May 6, 2002, size 444,079 bytes. Table 30 is recorded on said CD-ROM discs as "Table30.txt" created on May 6, 2002, size 399,825 bytes.

The contents of the files contained on the CD-ROM discs submitted with this application are hereby incorporated by reference into the specification.

Background

This invention is in the field of toxicology. More specifically, it relates to liver inflammation predictive genes and the methods of using such genes to predict liver inflammation.

Molecular biology and genomics technologies have potential to create dramatic advances and improvements for the science of toxicology as for other biological sciences. See, for example, MacGregor, et al. *Fund. Appl. Tox.* 26:156-173, 1995; Rodi et al., *Tox. Pathology* 27:107-110, 1999; Cunningham et al., *Ann. N.Y. Acad. Sci.* 919: 52-67, 2000; Pritchard et al., *Proc. Natl. Acad. Sci. USA* 98:13266-13271, 2001; and Fielden and Zacharewski, *Tox. Sciences* 60: 6-10, 2001. These technologies provide massive amounts of parallel information for processes and events occurring at the molecular level. This level of information is in dramatic contrast to conventional safety assessment toxicology that, to a large extent, currently relies on subjective evaluation (e.g., in-life observations of behavior, observations of gross abnormalities at necropsy and histopathological examination of stained tissue slides using a microscope). These current methodologies may be largely subjective and in some cases such as histopathological evaluation, they require someone with a high degree of training, experience and skill to make competent evaluations. Furthermore, many of the methodologies require access to organs and tissues that necessitates either killing laboratory animals or surgery to obtain tissue specimens.

Recently, there have been some initial efforts to apply molecular biology and genomics technologies to toxicology. Some efforts have involved application of gene expression measurements. See, for example, U.S. Patent 6,228,589 and WO 01/05804. Analysis of the data has yielded interesting observations of gene expressions that appear to correlate with some toxic effects or mechanisms. See, for example, Mueller et al. *Environmental Health Perspectives* 106(5): 277-230 (1998). However, there has been very little published work in toxicology so far that applies rigorous analytical and statistical techniques to the massive amounts of data available from genomics technologies. The observations, so far, have tended to be phenomenological and focused on individual gene responses rather than determining the generally applicable capabilities of patterns of gene expression to predict toxic effects (see, for example, studies of gene expression altered by exposure to liver

toxicants in Bartosiewicz et al., *Environ health Perspectives* 109:71-74, 2001; Huang et al., *Tox. Sciences* 63: 196-207, 2001). Even in the larger field of biological sciences, these types of analyses are just beginning to be evidenced in the literature (e.g., Golub et al., *Science* 286: 531-537, 1999).

Recently some work has been published that attempts to correlate gene expression profiles with the mechanism of toxicity of various hepatotoxins. See for example, Waring et al. *Tox. and Appl. Pharm.* 175:28-42 (2001). However there has been limited success thus far in the attempts to predict toxicity of compounds based on the gene expression profiles elicited upon treatment.

What is needed are genes and predictive models, which are capable of predicting toxicity response.

Summary

The invention provides liver inflammation predictive genes and predictive models which are useful to predict toxic responses to one or more agents.

One aspect of the present invention provides methods of predicting liver toxicity to an agent. A biological sample is obtained from an individual treated with the agent. Alternatively, a biological sample is obtained from an individual and treated with the agent. In vitro cultured cells or explants may also be treated with the agent. A gene expression profile on one or more of the liver inflammation predictive genes disclosed herein is obtained from the biological sample or in vitro cultured cells or explants used. The gene expression profile from the biological sample or cells treated with the agent is used in a predictive model to predict whether the agent will induce liver inflammation in the individual or would be predicted to produce liver toxicity following in vivo exposure.

In another aspect, the invention provides methods for determining the presence or absence of a no-observable effect level (NOEL) of an agent in an individual. A biological sample is obtained from individuals treated with the agent at different dose

levels. Alternatively, a biological sample is obtained from *In vitro* cultured cells or explants treated *in vitro* at different dose levels. A gene expression profile of a set of liver inflammation predictive genes from the samples, cultured cells or explants is obtained. The gene expression profile from the biological sample or cells treated with the agent are used in a predictive model to predict at which dose levels the agent will induce liver inflammation in the individual or *in vitro*. In one embodiment, the predictive model utilizes sets of liver inflammation predictive gene(s) selected from one of the various liver inflammation predictive gene sets disclosed herein (*i.e.*, Combination 5, 4, 3, 2, or 1), wherein the sets comprise one or more genes therefrom.

In another aspect, the invention provides methods of identifying a liver inflammation predictive gene. One method comprises providing a set of candidate toxicity predictive genes; evaluating said genes for their predictive performance with at least one training and test set of data in a Predictive Model to identify genes which are predictive of liver inflammation; and testing the performance of predictive genes for their ability to predict liver inflammation for: (i) different test sets of data, (ii) comparison of prediction for accurate versus random classification, and (iii) prediction using test data external to the data used to derive the predictive genes.

In another aspect, the invention provides a computer-based method for mining genes predictive for liver inflammation by: collecting expression levels of a plurality of candidate toxicity predictive genes in a multiplicity of samples; optionally storing the expression levels as a database on an electronic medium; defining a group of samples to be a training set; defining another group of samples to be a test set; optionally generating additional training and test sets; and selecting a set of genes which are predictive of liver inflammation based on evaluating the training set and the test set in a Predictive Model.

In another aspect, the invention provides a computer program product for predicting liver inflammation, which includes a set of liver inflammation predictive genes derived from mining a database having a plurality of gene expression profiles

indicative of toxicity. In one embodiment, the set of liver inflammation predictive genes includes at least one predictive gene from combination 5, 4, 3, 2, or 1 list.

In another aspect, the invention provides a library of expression profiles of liver inflammation predictive genes produced by the methods disclosed herein.

In another aspect, the invention provides an integrated system for predicting liver inflammation including equipment capable of measuring gene expression profiles of liver inflammation predictive genes from biological samples exposed to a test agent, operably linked to a computer system capable of implementing a predictive model.

Brief Description of the Drawings

Figure 1 is a flow diagram illustrating one embodiment of the present invention for identification of predictive genes.

Figure 2 is a flow diagram illustrating one embodiment of the present invention for evaluating performance of liver inflammation predictive genes.

Figure 3 is a flow diagram illustrating one embodiment of the present invention for predicting toxicity of liver inflammation predictive genes.

Brief Description of the Tables

Table 1 lists compounds, dose levels, liver pathology and abbreviations in the database in accordance with one embodiment of the present invention.

Table 2 lists the distribution of compounds in individual training and test sets for 24 hour liver data in accordance with one embodiment of the present invention.

Table 3 lists the genes whose expression at 24 hour directly correlates with liver inflammation at 72 hour, ranked by Pearson correlation coefficient in accordance with one embodiment of the present invention.

Table 4 lists the genes whose expression at 24 hour inversely correlates with liver inflammation at 72 hour, ranked by Spearman correlation coefficient in accordance with one embodiment of the present invention.

Table 5 lists the predictive genes for 24 hour expression data in accordance with one embodiment of the present invention.

Table 6 lists the randomly selected gene subsets from 24 hour Combo All gene set in accordance with one embodiment of the present invention.

Table 7 lists the randomly selected gene subsets from 24 hour Combos 5, 3, 2 combined in accordance with one embodiment of the present invention

Table 8 lists the randomly selected gene subsets from 24 hour all excluding predictive genes (*i.e.*, excluding Combo All genes) in accordance with one embodiment of the present invention.

Table 9 lists the liver inflammation individual sample prediction values for 24 hour data predictive genes (combined list and subsets) in accordance with one embodiment of the present invention.

Table 10 lists the liver inflammation compound-dose prediction values for 24 hour data predictive genes (combined list and subsets) in accordance with one embodiment of the present invention.

Table 11 lists the liver inflammation compound prediction values for 24 hour data predictive genes (combined list and subsets) in accordance with one embodiment of the present invention.

Table 12 lists the individual gene predictions for Combo 3 in accordance with one embodiment of the present invention.

Table 13 lists the individual gene predictions for Combo 2 in accordance with one embodiment of the present invention.

Table 14 lists the comparison of predictivity for correct liver inflammation classification and random classification using Combo gene sets and random subsets and 24 hour data in accordance with one embodiment of the present invention.

Table 15 lists the distribution of compounds in individual training and test sets for 6 hour liver data in accordance with one embodiment of the present invention.

Table 16 lists the genes whose expression at 6 hours directly correlates with liver inflammation at 72 hours, ranked by Pearson correlation coefficient in accordance with one embodiment of the present invention.

Table 17 lists the genes whose expression at 6 hours inversely correlates with liver inflammation at 72 hours, ranked by Spearman correlation coefficient in accordance with one embodiment of the present invention.

Table 18 lists genes whose expression at 6 hours is predictive of liver inflammation at 72 hours in accordance with one embodiment of the present invention.

Table 19 lists the comparison of predictivity for correct liver inflammation classification and random classification using combo gene sets and 6 hour data in accordance with one embodiment of the present invention.

Table 20 lists the distribution of compounds in individual training and test sets for 72 hour liver data in accordance with one embodiment of the present invention.

Table 21 lists genes whose expression at 72 hours directly correlates with liver inflammation at 72 hours, ranked by Pearson correlation coefficient in accordance with one embodiment of the present invention.

Table 22 lists genes whose expression at 72 hours inversely correlates with liver inflammation at 72 hours, ranked by Spearman correlation coefficient in accordance with one embodiment of the present invention.

Table 23 lists genes whose expression at 72 hours is predictive of liver

inflammation at 72 hours in accordance with one embodiment of the present invention.

Table 24 lists comparison of predictivity for correct liver inflammation classification and random classification using combo gene sets 72 hour data in accordance with one embodiment of the present invention.

Table 25 lists the RCT genes (ESTs) predictive for liver inflammation at 72 hours: best homology matches in accordance with one embodiment of the present invention.

Table 26 lists the genes predictive for liver inflammation, sequences, and accession numbers in accordance with one embodiment of the present invention.

Table 27 lists the liver inflammation predictive genes whose protein products are known to be secreted. The genes are from the table listing all the inflammation predictive genes at the three time points 6, 24, and 72 hours in accordance with one embodiment of the present invention.

Table 28 lists the expression data for the 6 hour timepoint in accordance with one embodiment of the present invention.

Table 29 lists the expression data for the 24 hour timepoint in accordance with one embodiment of the present invention.

Table 30 lists the expression data for the 72 hour timepoint in accordance with one embodiment of the present invention.

Detailed Description

One embodiment of the present invention relates to methods of predicting whether an agent or other stimulus will or is capable of inducing liver inflammation using predictive molecular toxicology analysis. Another embodiment of the present invention provides methods of predicting liver inflammation which comprise analyzing gene and/or protein expression across a number of liver inflammation biomarkers disclosed herein for patterns of expression that are predictive of liver inflammation in the recipient organism. This type of toxicity is significant as a toxic effect of many

chemical agents and is a significant component of adverse reactions to pharmaceuticals and drugs (see, for example, Treinen-Moslen, M. in Casarett and Doull's Toxicology: The Basic Science of Poisons Sixth Edition (C.D. Klaasen, ed.) Chp. 13., McGraw-Hill, New York, 2001). Adverse drug reactions are very often unpredictable, and may occur through acute exposure to the chemical agent or drug or through chronic exposures. For many drugs and chemical agents, inflammatory responses are implicated in amplifying or extenuating the initial toxic damage that occurs in the liver (see, for example, Treinen-Moslen, M., *ibid.*)

Another embodiment of the present invention provides that modulated transcriptional regulation of relatively small sets of certain genes in response to a test agent can accurately predict the occurrence of liver inflammation observed at later time points.

In yet another embodiment, the predictive model utilizes gene expression profiles from sets of liver inflammation predictive gene(s) selected from one of the various liver inflammation predictive gene sets disclosed herein (*i.e.*, Combination 5, 4, 3, 2, or 1), wherein the sets comprise one or more genes there from.

In still another embodiment, the predictive genes and models may be used to identify and evaluate various *in vitro* systems that can be used to accurately predict *in vivo* toxicity and to use the identified *in vitro* systems to accurately predict *in vivo* toxicity.

Provided herein are multiple sets of liver inflammation biomarkers which are useful in the practice of the liver inflammation prediction methods of the invention. In particular, applicants have identified 415 liver inflammation biomarkers which demonstrate utility in predicting liver inflammation. These biomarkers have been thoroughly characterized for their predictive performance, individually as well as in various combinations or subsets thereof. In addition, various optimized subsets of the liver inflammation biomarkers of the invention are disclosed. These sets have also been thoroughly characterized for predictive performance using the methods of the

invention. Among the subsets of liver inflammation genes provided herein are several which demonstrate prediction accuracies in the vicinity of about 85%.

Other embodiments of the present invention are further described by way of the experimental examples provided herein. These examples demonstrate that small sets of genes (*i.e.*, in some instances, as few as 1 biomarker gene) may be used to accurately predict liver inflammation. For example, as further described in the Examples, analysis of mRNA expression of only a few genes can provide an indication of whether a test agent will or will not induce liver inflammation.

The predictive capacity of the methods of the invention have been verified by comparisons with random classifications. Moreover, the methods of the invention are capable of distinguishing between agent dose levels that induce toxicity (typically higher doses) and those doses that are non-toxic. This latter feature is an important component of meaningful toxicological evaluation.

General Techniques: The several embodiments of the present invention employ, unless otherwise indicated, conventional techniques of molecular biology (including recombinant techniques), microbiology, cell biology, biochemistry, nucleic acid chemistry, and immunology, which are well known to those skilled in the art. Such techniques are explained fully in the literature, such as, *Molecular Cloning: A Laboratory Manual*, second edition (Sambrook et al., 1989) and *Molecular Cloning: A Laboratory Manual*, third edition (Sambrook and Russel, 2001), (jointly referred to herein as "Sambrook"); *Current Protocols in Molecular Biology* (F.M. Ausubel et al., eds., 1987, including supplements through 2001); *PCR: The Polymerase Chain Reaction*, (Mullis et al., eds., 1994); Harlow and Lane (1988) *Antibodies, A Laboratory Manual*, Cold Spring Harbor Publications, New York; Harlow and Lane (1999) *Using Antibodies: A Laboratory Manual* Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY (jointly referred to herein as "Harlow and Lane"), Beaucage et al. eds., *Current Protocols in Nucleic Acid Chemistry* John Wiley & Sons, Inc., New York, 2000) and Casarett and Doull's *Toxicology The Basic Science of Poisons*, C. Klaassen, ed.,

6th edition (2001).

Definitions: Unless otherwise defined, all terms of art, notations and other scientific terminology used herein are intended to have the meanings commonly understood by those of skill in the art to which this invention pertains. In some cases, terms with commonly understood meanings are defined herein for clarity and/or for ready reference, and the inclusion of such definitions herein should not necessarily be construed to represent a substantial difference over what is generally understood in the art. The techniques and procedures described or referenced herein are generally well understood and commonly employed using conventional methodology by those skilled in the art, such as, for example, the widely utilized molecular cloning methodologies described in Sambrook et al., *Molecular Cloning: A Laboratory Manual* 2nd edition (1989) Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y. As appropriate, procedures involving the use of commercially available kits and reagents are generally carried out in accordance with manufacturer defined protocols and/or parameters unless otherwise noted.

"Toxic" or "toxicity" refers to the result of an agent causing adverse effects, usually by a xenobiotic agent administered at a sufficiently high dose level to cause the adverse effects.

The term "liver inflammation" refers to an inflammatory response of the liver that can be initiated by physical injury, infection, or local immune response and can include local accumulation of fluid, plasma proteins and white blood cells, as well as migration and infiltration of neutrophils, lymphocytes, and other cells of the immune system into regions of damaged liver.

As used herein, the terms "liver inflammation biomarker" and "liver inflammation predictive gene" are used interchangeably and refer to a gene whose expression, measured at the RNA or protein level can predict the likelihood of a liver inflammation response.

A "toxicological response" refers to a cellular, tissue, organ or system level response to exposure to an agent. At the molecular level, this can include, but is not limited to, the differential expression of genes encompassing both the up- and down-regulation of expression of such genes at the RNA and/or protein level; the up- or down-regulation of expression of genes which encode proteins associated with response to and mitigation of damage, the repair or regulation of cell damage; or changes in gene expression due to changes in populations of cells in the tissue or organ affected in response to toxic damage.

An "agent" or "compound" is any element to which an individual can be exposed and can include, without limitation, drugs, pharmaceutical compounds, household chemicals, industrial chemicals, environmental chemicals, other chemicals, and physical elements such as electromagnetic radiation.

The term "biological sample" as used herein refers to substances obtained from an individual. The samples may comprise cells, tissue, parts of tissues, organs, parts of organs, or fluids (e.g., blood, urine or serum). Biological samples include, but are not limited to, those of eukaryotic, mammalian or human origin.

"Sample" is defined for the purposes of prediction as a biological sample and the gene expression data for that sample. Each sample may come from an individual animal. A toxicity classification may also be associated with the sample.

"Gene expression" as used herein refers to the relative levels of expression and/or pattern of expression of a gene. The expression of a gene may be measured at the DNA, cDNA, RNA, mRNA, protein level or combinations thereof.

"Gene expression profile" refers to the levels of expression of multiple different genes measured for the same sample. Gene expression profiles may be measured in a sample, such as samples comprising a variety of cell types, different tissues, different organs, or fluids (e.g., blood, urine, spinal fluid, sweat, saliva or serum) by various methods including but not limited to microarray technologies and quantitative

and semi-quantitative RT-PCR (e.g., Taqman™) techniques, as well as techniques for measuring expression of proteins.

"Individual" refers to a vertebrate, including, but not limited to, a human, non-human primate, mouse, hamster, guinea pig, rabbit, cattle, sheep, pig, chicken, and dog.

As used herein, the terms "hybridize", "hybridizing", "hybridizes" and the like, used in the context of polynucleotides, are meant to refer to conventional hybridization conditions, such as hybridization in 50% formamide/6X SSC/0.1% SDS/100 µg/ml ssDNA, in which temperatures for hybridization are above 37 degrees Celsius and temperatures for washing in 0.1X SSC/0.1% SDS are above 55 degrees Celsius, and preferably to stringent hybridization conditions. The hybridization of nucleic acids can depend upon various factors such as their degree of complementarity as well as the stringency of the hybridization reaction conditions. Stringent conditions can be used to identify nucleic acid duplexes with a high degree of complementarity. Means for adjusting the stringency of a hybridization reaction are well-known to those of skill in the art. See, for example, Sambrook, *et al.*, "Molecular Cloning: A Laboratory Manual," Second Edition, Cold Spring Harbor Laboratory Press, 1989; Ausubel, *et al.*, "Current Protocols In Molecular Biology," John Wiley & Sons, 1996 and periodic updates; and Hames *et al.*, "Nucleic Acid Hybridization: A Practical Approach," IRL Press, Ltd., 1985. In general, conditions that increase stringency (*i.e.*, select for the formation of more closely matched duplexes) include higher temperature, lower ionic strength and presence or absence of solvents; lower stringency is favored by lower temperature, higher ionic strength, and lower or higher concentrations of solvents.

In the context of amino acid sequence comparisons, the term "identity" is used to express the percentage of amino acid residues at the same relative position which are the same. Also in this context, the term "homology" is used to express the percentage of amino acid residues at the same relative positions which are either identical or are similar, using the conserved amino acid criteria of BLAST analysis, as is generally

understood in the art. Further details regarding amino acid substitutions, which are considered conservative under such criteria, are discussed below.

Identification of Liver Inflammation Biomarkers: Generation of Toxicology Gene Expression Databases: The liver inflammation biomarkers described herein were initially identified utilizing a database generated from large numbers of *in vivo* experiments, wherein the differential expression of approximately 700 rat genes, measured at various time points, in response to multiple toxic compounds inducing various specific toxic responses, as visualized through microscopic histopathological analysis, was quantified, as described in pending United States Patent Application filed January 29, 2002 (serial number 10/060,893). This quantitative gene expression data, as well as corresponding histopathological information, was then subjected to an analytical approach specifically designed to identify genes which not only correlated with the observed histopathology, but also demonstrated an ability to be used in a model capable of accurately predicting the occurrence of the toxic response associated with the observed histopathology. A detailed description of this identification process is presented in the Examples. A flow diagram illustrating how the liver inflammation biomarkers of one embodiment of the present invention were identified is illustrated in Figure 1.

In addition to the database described and utilized herein, other toxicology gene expression databases may be generated, and used to identify additional liver toxicity biomarkers, which may also be employed in the practice of the liver inflammation prediction methods of the invention. Such databases may be generated with test compounds capable of inducing various pathologies indicative of a toxic response in the liver and/or other organs or systems, over different time periods and under different administration and/or dosing conditions, including without limitation hepatocellular necrosis, regenerative proliferation, neoplasia, apoptosis, fibrosis, and cirrhosis. An example of compounds, dose levels, liver toxicity classifications and histopathology scores used in the Examples which follow are provided in Table 1. The compounds and dose levels are abbreviated in the Abbreviation Column. The

Inflammation Score relates the histopathology liver inflammation, a score of "2" or higher indicates histopathology of increasing severity.

Such databases may be generated using organisms other than the rat, including without limitation, animals of canine, murine, or non-human primate species. In addition, such databases may incorporate data derived from human clinical trials and post-approval human clinical experiences. Various methods for detecting and quantitating the expression of genes and/or proteins in response to toxic stimuli may be employed in the generation of such databases, as are generally known in the art. For example, microarrays comprising multiple cDNAs or oligonucleotide probes capable of hybridizing to corresponding transcripts of genes of interest may be used to generate gene expression profiles. Additionally, a number of other methods for detecting and quantitating the expression of gene transcripts are known in the art and may be employed, including without limitation, RT-PCR techniques such as TaqMan®, RNase protection, branched chain, etc.

Databases comprising quantitative gene expression information preferably include qualitative and quantitative and/or semi-quantitative information respecting the observed toxicological responses and other conventional toxicology endpoints, such as for example, body and organ weights, serum chemistry and histopathology observations, histopathology scores and/or similar parameters.

Identification of Correlating Genes: For the purpose of identifying candidate predictive genes, the database preferably includes histopathology scores for each animal which has been exposed to one or more agent(s). These scores can be assigned based on actual histopathology observations for the tissue and animal or on the basis of effects observed for other animals treated with the same agent and dose level. The scores are numerical scores that reflect the occurrence and severity of histopathological changes. These scores can be adjusted to have similar range to gene expression changes. For example, a score of 1 could be assigned to samples with no changes and scores of 2-8 assigned to increasingly severe changes. Because

the scores are numerical, they are suitable for use with a variety of statistical correlation and similarity measures.

An example of a histopathology scoring system is provided in Example 1. Referring now to Figure 1, histopathology scores may be utilized to identify genes which correlate with the observed toxicological response, using any number of statistical correlation and similarity analysis techniques, including without limitation those correlation or similarity measures described or employed in Example 1 (e.g., Pearson, Spearman, change, smooth, distance etc.). Such correlating genes may be used as predictive gene candidates. Examples of genes whose expression at 24 hours after treatment correlates with histopathology observed at 72h are detailed in Tables 3 and 4. In one embodiment, the correlating gene lists as well as the entire array gene list are used as input gene lists in the GeneSpring™ (Version 4.1, Silicon Genetics, Redwood City, CA) Predict Parameter Values tool (otherwise known hereafter as "Predictive Model").

Class Prediction and Classification: Statistical analysis of the database of gene expression profiles can be affected by utilizing commercially available software programs. In one embodiment, GeneSpring™ is used. Other software programs which can be used for statistical analysis are SAS software packages (SAS Institute Inc., Cary, NC) and S-PLUS® software (Insightful Corporation, Seattle, WA).

Using GeneSpring™ software, class predictions can be made from the genes in the database, as detailed in Example 1, using one or more training and test sets. In one embodiment, five training sets and five test sets are obtained, as shown in Example 1 (Table 2). Liver toxicological classifications are entered for the samples in each training and test set. Compounds that did not elicit histopathology (score =1) are identified as negative for training and test sets. Compounds that elicit histopathology (score of 2 or greater) are identified as positive for training and test sets. Compounds denoted with Low indicates low dose of the compound is administered. Compounds denoted with High, indicates high dose of the compound is administered. Compound

abbreviations in Table 2 are defined in Table 1. Toxicological classifications can be defined by the presence or the absence of various pathologies. In yet another embodiment, toxicity observed as inflammation is defined as three classifications (*i.e.* liver necrosis, liver necrosis with inflammation, or no histopathology (negative)) observed 72 hours after treatment with an agent. In another embodiment, toxicity observed as inflammation is defined as two classifications (*i.e.* liver inflammation or no inflammation) observed 72 hours after treatment with an agent. However, toxicity can manifest in other liver pathologies such as regenerative proliferation, neoplasia, apoptosis, fibrosis, and cirrhosis. More complex (four or more) classifications can be used in defining multiple pathologies.

Once the training sets have been selected, then predicted classifications of the test set samples are obtained by using k-nearest neighbor (or *knn*) voting procedure. The class in which each of the *knn* is determined and the test sample is assigned to the class with the largest representation after adjusting for the proportion of classifications in the training set. In one embodiment, adjustments are made to account for different proportions of classes in the training set.

Toxicity can also be observed at various time points after exposure to an agent and is not limited to only 72 hour after treatment. A skilled toxicologist can determine the optimal time after exposure to an agent to observe pathology by either what has been disclosed in the art or a stepwise experimentation with time increments, for example 2, 4, 6, 12, 18, 24, 36, 48 hours post-exposure or even longer time increments, for example, days, weeks, or months after exposure to the agent.

Identification of Predictive Genes: Referring now to Figure 1, a description of the process used to identify liver inflammation predictive genes in one embodiment of the present invention is illustrated. According to this embodiment of the present invention, the process is run independently for each time point.

The number of input genes that are to be used in the Predictive Model can be varied, for example 50, 40, 30, 20, 10, 5, 2, or 1 gene(s) can be used. In one

embodiment, at least 50 genes are used.

A gene list is generated comparing high predictive accuracy to the number of genes used. In one embodiment, optimum gene lists for all input gene lists are combined for each training and test set and then these combined lists for all five training and test sets are merged to create an aggregate list of predictive genes. The aggregate list can then be subdivided to smaller lists of genes based on the number of times that the genes occurred on the predictive gene lists for an individual training or test set. The resulting gene lists are designated herein as Combo 5, 4, 3, 2, or 1 lists. The genes that were predictive in all 5 training and test sets are designated as Combo 5 and the genes that were predictive in 4 of 5 training and test sets are designated as Combo 4 and so forth. Table 26 presents gene names, accession numbers and sequence information for the liver inflammation predictive genes found by analysis of the database in the manner described above in accordance with one embodiment of the present invention. Each of these genes has been demonstrated to contribute to predictive performance for at least one input gene list and training/test set and one time point. Table 25 lists homologous genes for the RCT sequences that were identified by BLAST search using the GeneBank NR database as the target database. Referring now to Table 25, homologies are given from Blast searches using Phase 1/RCT sequence as the query sequence and GeneBank NR database as the target sequence database in accordance with one embodiment of the present invention. The best Blast homology sequence observed is given. In general, no significant homology indicates that no Blast match was observed with a BIT score > 100.

Evaluation of Predictive Genes for Liver Inflammation: The predictive genes are evaluated for predictive performance as illustrated in Figure 2. For each gene list prediction, a table of data is generated using the Predictive Model which includes: the test set containing information about the actual call (*i.e.*, negative, necrosis with inflammation, necrosis), the predicted call (*i.e.*, negative, necrosis with inflammation, necrosis), and the P-value cutoff ratio. Expression data that can be used with the K-nearest neighbor model and predictive genes to enable one skilled in the art to make

predictions are given in Tables 28-30.

Referring now to Table 28, gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes as presented in Table 18.

Referring now to Table 29, gene expression data for 24 hour timepoint are presented as mean ratio of treatment/control for all 24 hour predictive genes as presented in Table 5.

Referring now to Table 30, (1) gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes as presented in Table 23. (2) Compound Dose indicates that compound and dose abbreviations are defined in Table 1. (3) Animal Number indicates the number of the individual animal in which the compound is tested. (4) Liver inflammation toxicity classification information as for compound-dose group at 72 h: yes -necr, indicates that necrosis was observed; yes-both, indicates that necrosis with inflammation was observed; no, indicates that no histopathology was observed. (5) Gene name is the Predictive gene (as in Table 23 and as included in Table 26).

The combined list of predictive genes or alternatively, Combo 5, 4, 3, 2, or 1 list or subsets thereof is used as input into the Predictive Model. As an external verification of the predictive abilities of the genes found to be predictive for liver inflammation, random lists of genes may be generated and also used as input into the Predictive Model. Example 2 describes the evaluation of the predictive performance of the liver inflammation predictive genes.

Predictive performance may also be assessed using data from different time points after exposure to the agent. In one embodiment, 24 hour expression data is used. In another embodiment, 6 hour expression data is used, as described in Examples 3 and 4. In another embodiment, 72 hour expression data is used, as described in Example 5 and 6. As illustrated in Table 9, the predictive accuracy using

24 hour expression data and the largest predictive gene list is about 86%.

Somewhat lower predictive accuracies were observed for the 6h and 72 h data. All of the combo lists as well as Combo All list had significantly higher accuracy than using random classifications.

Predictive performance may also be assessed using subsets of genes from the different Combo lists. As indicated in Example 2, most randomly selected subsets of the Combo gene lists yielded predictive performances of about 70% or greater and even individual genes had mean predictive accuracies that were often greater than about 70%. In one embodiment, using 10 genes from Combo All yields about 84% accuracy. Using different Combo lists may require a greater number of genes to reach the same accuracy level.

The liver inflammation predictive genes disclosed herein and liver inflammation predictive genes identified by using methods disclosed herein are useful for predicting liver inflammation in response to exposure to one or more agents.

The discovery that relatively small sets of different genes have predictive value permits flexible applications. The choice of how many and which genes to use can be tailored to a variety of different purposes. Predictivity is observed for sets of a few genes. These small sets may be particularly advantageous in applications where measurement of only a few RNA species has considerable advantages in terms of sample processing logistics, speed and cost. These applications would include relatively high throughput screens for predictive capability. An example of this would be an early screen using small samples of primary cells or cultured cell lines that can be processed with automated robotic equipment for treatment and isolation of RNA followed by efficient technologies for measuring expression of a few RNA species such as branched chain technology or RT-PCR.

The use of larger numbers of predictive genes provides redundancy which may improve accuracy and precision. Applications using larger numbers of predictive

genes may include, for example, tests of drug candidates at later stages of commercial development. In this regard, larger numbers of predictive genes may be desirable at later stages of preclinical development of a therapeutic candidate, where *in vivo* samples can be obtained and more comprehensive methods such as microarray measurement of gene expression are appropriate. The larger gene sets can also include different subsets of genes which may offer more insight into potential mechanisms of toxicity, providing the potential to predict long term toxic consequences such as chronic, irreversible toxicity or carcinogenicity.

Some genes within the liver inflammation predictive gene sets provided herein may also be suitable for prediction of toxicity in other organs or may be preferable for predicting toxicity for wider ranges of timepoints or treatment routes or regimens. As an example of the latter, some of the predictive genes are observed at three different timepoints after treatment. These genes may be useful for prediction in cases where the samples come from treatment protocols that have different measurement timepoints or routes of administration than those employed for the database used in the discovery of the predictive genes disclosed herein or where the toxicokinetics for a particular agent are known or suspected to be different from those in the database.

In one embodiment, the agent is an agent for which no expression profile has been assessed or stored in the database or library. An animal, *e.g.*, rat, is dosed with such an agent and the gene expression profile(s) is the test set for the Predictive Model. The training set which is used in the Predictive Model in this case can be the entire database of sample array data because the test set data is not present in the database. The prediction can be made with accuracy without the use of histopathology scores as part of the input into the Predictive Model.

In another embodiment the agent is an agent present in the database but is used at a different dose level or with a different treatment protocol than used in the database. The training set which is used in the Predictive Model in this case can be the entire database of sample array data because the test set data is not present in

the database. Again, the prediction can be made with accuracy without the use of histopathology scores as part of the input into the Predictive Model.

In another embodiment, the exposure time of the agent is other than 6, 24, or 72 hours, or repeat dosing protocols are used. In this case, the skilled artisan can use the predictive toxicity genes from surrounding time points to extrapolate the predicted toxicity without undue experimentation. For example, if the individual has been exposed to the agent for 12 hours, then predictive genes from 6 and 24 hours timepoints are used as guidelines for extrapolating toxicity predictions.

In another embodiment, the liver inflammation predictive genes and a predictive model can be used to determine the presence or absence of a no-observed toxicity effect level. An agent can be used at different treatment levels and expression profiles obtained for each treatment level. The predictive genes and predictive model can be used to determine which dose levels elicit a response that is predicted to be toxic and which dose levels are not toxic. In contrast to conventional endpoints for determining no-effect levels, the use of expression data, predictive genes and predictive models applies a number of quantitative endpoints and criteria instead of subjective endpoints and criteria. This permits more rigorous and precisely defined determination of no effect levels.

In another embodiment, the liver inflammation predictive genes can be used to detect toxic effects that may be manifested as long lasting or chronic consequences such as irreversible toxicity or carcinogenesis. The predictive genes and model can be applied to databases where classifications of training and test set samples are made with respect to actual or putative endpoints such as irreversible toxicity or carcinogenicity.

In another embodiment, the predictive genes can be used in a variety of alternative models to predict liver inflammation. Some of these models do not require the direct use of data in a database but use functions or coefficients derived from the database. In another embodiment, the predictive genes and models may be used to

evaluate *in vitro* systems for their ability to reflect *in vivo* toxic events and to use such *in vitro* systems for predicting *in vivo* toxicity. Expression profiles for predictive genes can be created from candidate *in vitro* assays using treatments with agents of known *in vivo* toxicity and for which *in vivo* data on gene expression are available. The expression data and predictive models of this invention can be used to determine whether the *in vitro* assay system has predictive gene expression responses that accurately reflect the *in vivo* situation. Large sets of predictive genes as described in one embodiment of the present invention can be tested in such models for their suitability and performance with the candidate *in vitro* systems. This is a superior and novel tool for evaluating and optimizing *in vitro* systems for their ability to reflect and accurately predict *in vivo* responses.

In another embodiment, the predictive genes and models may be used with an *in vitro* system to accurately predict *in vivo* toxicity. *In vitro* systems that have been evaluated and optimized as described above are treated with test agents and expression profiles are measured for predictive genes. The expression profiles are used in conjunction with a predictive model to predict *in vivo* toxicity. In this embodiment, there can be considerable reduction in the use of laboratory animals. Additionally the application of this embodiment to *in vitro* human systems can provide a unique capability to accurately predict human toxic responses without human *in vivo* exposure or treatment.

In another embodiment, measurement of the expression levels of the proteins encoded by the predictive genes can be used in conjunction with predictive models to predict toxicity. Among the full set of liver inflammation predictive genes are various genes known to encode cell surface, secreted and/or shed proteins. This enables the development of methods for predicting toxicity using protein biomarkers. For example, as disclosed in Table 27, there are 39 genes in the master predictive set which are known to encode secreted proteins. The protein products are easier to access since they are secreted into body fluids and are thus more amenable to be quantified. Thus, in another aspect of the present invention, liver inflammation predictive assays which

detect the expression of one or more of said predictive proteins may be developed. Such assays may have several advantages, such as:

Ability to use archived tissue specimens such as preserved or embedded tissues which are not suitable for measurement of RNA expression.

Ability to examine predictive protein expression in tissue slides using *in situ* labeling and microscopic observation. This is useful for detecting predictive toxicity signals occurring in very small sub-populations of cells.

Ability to detect protein markers in specimens that can be readily obtained with little or no invasiveness (e.g., blood, urine, sweat, saliva).

Reduction in animal use in laboratory studies such that no sacrifice of animals necessary to obtain tissue specimens when toxicity prediction can be made with specimens that can be obtained without animal sacrifice or surgery.

Application for human use where tissue specimens cannot be obtained or are only obtained with great difficulty.

In another embodiment, the identified predictive genes can be considered as potential therapeutic targets when the genes are involved in toxic damage or repair responses whose expression or functional modification may attenuate, ameliorate or eliminate disease conditions or adverse symptoms of disease conditions.

In another embodiment the predictive genes can be organized into clusters of genes that exhibit similar patterns of expression by a variety of statistical procedures commonly used to identify such coordinate expression patterns. Common functional properties of these clustered genes can be used to provide insight into the functional relationship of the response of these genes to toxic effects. Common genetic properties of these genes (e.g., common regulatory sequences) may provide insight into functional aspects by revealing known or novel similarities in the coding region of the genes. The presence of common known or novel signal transduction systems that

regulate expression of the genes can also provide functional insight. The presence of common known or novel regulatory sequences in the identified predictive genes can also be used to identify additional liver inflammation predictive genes.

In yet another embodiment, the liver inflammation predictive genes can be used to predict toxicity responses in other species, for example, human, non-human primate, mouse, hamster, guinea pig, hamster, rabbit, cattle, sheep, pig, chicken, and dog. Some members of the liver inflammation predictive genes may also be more suitable for prediction of toxicity in species other than the species used to derive the database (rat in the case of the examples provided). One method for identifying such genes involves examining DNA sequence databases to identify and characterize orthologous sequences to the predictive genes in the target species. One of skill in the art can examine the orthologous sequences for similarity in amino acid coding regions and motifs as well as for similarities in regulatory regions and motifs of the gene.

In another embodiment, liver inflammation predictive genes or gene sequences are used for screening other potential toxicity predictive genes or gene sequences in other species or even within the same species using methods known in the art. See, for example, Sambrook *supra*. Gene sequences which hybridize under stringent conditions to the liver inflammation predictive gene sequences disclosed herein may be selected as potential toxicity predictive genes. Additionally, genes which demonstrate significant homology with the liver inflammation predictive genes disclosed herein (preferably at least about 70%) may be selected as toxicity predictive gene candidates. It is understood that conservative substitutions of amino acids are possible for gene sequences which have some percentage homology with the liver inflammation predictive gene sequences of this invention. A conservative substitution in a protein is a substitution of one amino acid with an amino acid with similar size and charge. Groups of amino acids known normally to be equivalent are: (a) Ala, Ser, Thr, Pro, and Gly; (b) Asn, Asp, Glu, and Gln; (c) His, Arg, and Lys; (d) Met, Glu, Ile, and Val; and (e) Phe, Tyr, and Trp.

It is understood that the predictive liver inflammation genes can be used as guides to predicting toxicity for agents that have been administered via different routes (intraperitoneal, intravenous, oral, dermal, inhalation, mucosal, etc.) from the routes that were used to generate the database or to identify the liver inflammation predictive genes. Furthermore, the invention is not intended to be limiting to agents that have been administered at different dosages than the agents that were used to generate the database or to identify the predictive liver inflammation genes.

Data described in the examples were generated using the microarray technology disclosed in the Examples. However, the invention is not dependent on using this particular platform. Other similar gene expression analysis technologies may be incorporated in the practice of this invention. These can include, but are not limited to, other arrays containing the predictive genes, RT-PCR (e.g., TaqMan®), branched chain technology, RNase protection or any other method which quantitatively detects the expression of RNA polynucleotides. Embodiments of the present invention can be practiced using these other technologies by generating a database of expression measurements for the predictive genes using samples such as those used in the database described in Example 1. This database can then be used in a model such as the K-nearest neighbor model or can be used to develop any of a number of other models.

The following Examples are provided to illustrate but not to limit the invention in any manner.

EXAMPLES

Example 1 Database of Compounds and Liver Inflammation: Compounds and treatments list used to construct the liver database are given in Table 1. This table also provides the evaluation of the liver inflammation observed in samples collected 72 hours after treatment.

Sprague Dawley rats Crl:CD from Charles River, Raleigh, NC were divided into treated rats that receive a specific concentration of the compound (see Table 1) and

the control rats that only received the vehicle in which the compound is mixed (e.g., saline).

At specified timepoints (6h, 24h and 72h) after administration (intraperitoneal route) of the compound, a set number of rats (usually 3 control and 3 treated) were euthanized and tissues collected. Each rat was heavily sedated with an overdose of CO₂ by inhalation and a maximum amount of blood drawn. Exsanguination of the rat by this drawing of blood kills the rat. The method of collecting the tissues is very important and ensures preserving the quality of the mRNA in the tissues. The body of the rat was then opened up and prosectors rapidly removed the tissues (including liver) and immediately placed them into liquid nitrogen. All of the organs/tissues were completely frozen within 3 minutes of the death of the animal to ensure that mRNA did not degrade. The organs/tissues were then packaged into well-labeled plastic freezer quality bags and stored at -80 degrees until needed for isolation of the mRNA from a portion of the organ/tissue sample.

Isolating DNA/RNA from animal tissues or cells: Total RNA was isolated from liver tissue samples using the following materials: Qiagen RNeasy midi kits, 2-mercaptoethanol, liquid N₂, tissue homogenizer, dry ice samples were kept on ice when specified.

If a tissue needed to be broken, then the tissue sample was placed on a double layer of aluminum foil which was then placed within a weigh boat containing a small amount of liquid nitrogen. The aluminum foil was folded around the tissue and then struck by a small foil-wrapped hammer to administer mechanical stress forces.

About 0.15-0.20 g of liver tissue was weighed out and placed in a sterile container. To preserve integrity of the RNA, all tissues were kept on dry ice when other samples were being weighed. A RLT (Qiagen®) buffer was added to the sample to aid in the homogenization process. The tissue was homogenized using commercially available homogenizer (IKA Ultra Turrax T25 homogenizer) with the 7 mm microfine sawtooth shaft and generator (195 mm long with a processing range of 0.25 ml to 20 ml, item #

372718). After homogenization, samples were stored on ice until all samples were homogenized. The homogenized tissue sample was spun to remove nuclei thus reducing DNA contamination. The supernatant of the lysate was then transferred to a clean container containing an equal volume of 70% EtOH in DEPC treated H₂O and mixed. RNA was isolated by putting the supernatant through an RNeasy spin column, washed, and subsequently eluted. Small quantities of remaining DNA were removed by use of DNase enzyme during the RNA isolation procedure following the instructions provided by Qiagen and alternatively by lithium chloride (LiCl) precipitation following the RNA isolation. The isolated RNA pellet was stored in Rnase-free water or in an RNA storage buffer (10 mM sodium citrate), Ambion Cat #7000. The RNA amount was then quantitated using a spectrophotometer.

Rat 700 CT chip: Gene expression data was generated from a microarray chip that has a set of toxicologically relevant rat genes which are used to predict toxicological responses. The rat 700 CT gene array is disclosed in pending U.S. applications 60/264,933; 60/308,161; and pending application filed on January 29, 2002 (serial number 10/060,893).

Microarray RT reaction: Fluorescence-labeled first strand Cdna probe was made from the total RNA or Mrna isolated from livers of control and treated rats. This probe was hybridized to microarray slides spotted with DNA specific for toxicologically relevant genes. The materials needed are: total or messenger RNA, primer, Superscript II buffer, dithiothreitol (DTT), nucleotide mix, Cy3 or Cy5 dye, Superscript II (RT), ammonium acetate, 70% EtOH, PCR machine, and ice.

The volume of each sample that would contain 20µg of total RNA (or 2µg of Mrna) was calculated. The amount of DEPC water needed to bring the total volume of each RNA sample to 14 µl was also calculated. If RNA was too dilute, the samples were concentrated to a volume of less than 14 µl in a speedvac without heat. The speedvac must be capable of generating a vacuum of 0 Milli-Torr so that samples can freeze dry under these conditions. Sufficient volume of DEPC water was added to bring the total

volume of each RNA sample to 14 μ l. Each PCR tube was labeled with the name of the sample or control reaction. The appropriate volume of DEPC water and 8 μ l of anchored oligo Dt mix (stored at -20°C) was added to each tube.

Then the appropriate volume of each RNA sample was added to the labeled PCR tube. The samples were mixed by pipeting. The tubes were kept on ice until all samples are ready for the next step. It is preferable for the tubes to kept on ice until the next step is ready to proceed. The samples were incubated in a PCR machine for 10 minutes at 70°C followed by 4°C incubation period until the sample tubes were ready to be retrieved. The sample tubes were left at 4°C for at least 2 minutes.

The Cy dyes are light sensitive, so any solutions or samples containing Cy-dyes should be kept out of light as much as possible (e.g., cover with foil) after this point in the process. Sufficient amounts of Cy3 and Cy5 reverse transcription mix were prepared for one to two more reactions than would actually be run by scaling up the following: For labeling with Cy3:

8 μ l 5x First Strand Buffer for Superscript II, 1 μ l 0.1 M DTT, 2 μ l Nucleotide Mix, 2 μ l of 1:8 dilution of Cy3 (e.g., 0.125Mm cy3Dctp), and 2 μ l Superscript II

For labeling with Cy5.

8 μ l 5x First Strand Buffer for Superscript II, 4 μ l 0.1 M DTT, 2 μ l Nucleotide Mix, 2 μ l of 1:10 dilution of Cy5 (e.g., 0.1Mm Cy5Dctp), and 2 μ l Superscript II

About 18 μ l of the pink Cy3 mix was added to each treated sample and 18 μ l of the blue Cy5 mix was added to each control sample. Each sample was mixed by pipeting. The samples were placed in a DNA engine (PTC-200 Petier Thermal Cycler, MJ Research) for 2 hours at 45°C followed by 4°C until the sample tubes were ready to be retrieved.

In addition to the desired cDNA product, the completed RT reaction contained impurities that must be removed. These impurities included excess primers, nucleotides, and dyes. The primary method of removing the impurities was by following the instructions in the QIAquick PCR purification kit (Qiagen cat#120016).

Alternatively, the completed RT reactions were cleaned of impurities by ethanol precipitation and resin bead binding. The samples from DNA engine were transferred to Eppendorf tubes containing 600 μ l of ethanol precipitation mixture and placed in -80°C freezer for at least 20-30 minutes. These samples were centrifuged for 15 minutes at 20800 x g (14000 rpm in Eppendorf model 5417C) and carefully the supernatant was decanted. A visible pellet was seen (pink/red for Cy3, blue for Cy5). Ice cold 70% EtOH (about 1 ml per tube) was used to wash the tubes and the tubes were subsequently inverted to clean tube and pellet. The tubes were centrifuged for 10 minutes at 20800 x g (14000 rpm in Eppendorf model 5417C), then the supernatant was carefully decanted. The tubes were air dried for about 5 to 10 minutes, protected from light. When the pellets were dried, they were resuspended in 80 μ l nanopure water. The cDNA/mRNA hybrid was denatured by heating for 5 minutes at 95°C in a heat block and flash spun. Then the lid of a "Millipore MAHV N45" 96 well plate was labeled with the appropriate sample numbers. A blue gasket and waste plate (v-bottom 96 well) was attached. About 160 μ l of Wizard DNA Binding Resin (Promega cat#A1151) was added to each well of the filter plate that was used. Probes were added to the appropriate wells (80 μ l cDNA samples) containing the Binding Resin. The reaction is mixed by pipeting up and down ~ 10 times. The plates were centrifuged at 2500 rpm for 5 minutes (Beckman GS-6 or equivalent) and then the filtrate was decanted. About 200 μ l of 80% isopropanol was added, the plates were spun for 5 minutes at 2500 rpm, and the filtrate was discarded. Then the 80% isopropanol wash and spin step was repeated. The filter plate was placed on a clean collection plate (v-bottom 96 well) and 80 μ l of Nanopure water, pH 8.0-8.5 was added. The pH was adjusted with NaOH. The filter plate was secured to the collection plate and after 5 minutes was centrifuged for 7 minutes at 2500 rpm.

Purification of Cy -Dye Labeled cDNA: To purify fluorescence-labeled first strand cDNA probes, the following materials were used: Millipore MAHV N45 96 well plate, v-bottom 96 well plate (Costar), Wizard DNA binding Resin, wide orifice pipette tips for 200 to 300 μ l volumes, isopropanol, nanopure water. It is highly preferable to keep the

plates aligned at all times during centrifugation. Misaligned plates lead to sample cross contamination and/or sample loss. It is also important that plate carriers are seated properly in the centrifuge rotor.

The lid of a "Millipore MAHV N45" 96 well plate was labeled with the appropriate sample numbers. A blue gasket and waste plate (v-bottom 96 well) was attached. Wizard DNA Binding Resin (Promega cat#A1151) was shaken immediately prior to use for thorough resuspension. About 160 μ l of Wizard DNA Binding Resin was added to each well of the filter plate that was used. If this was done with a multi-channel pipette, wide orifice pipette tips would have been used to prevent clogging. It is highly preferable not to touch or puncture the membrane of the filter plate with a pipette tip. Probes were added to the appropriate wells (80 μ l cDNA samples) containing the Binding Resin. The reaction is mixed by pipeting up and down ~10 times. It is preferable to use regular, unfiltered pipette tips for this step. The plates were centrifuged at 2500 rpm for 5 minutes (Beckman GS-6 or equivalent) and then the filtrate was decanted. About 200 μ l of 80% isopropanol was added, the plates were spun for 5 minutes at 2500 rpm, and the filtrate was discarded. Then the 80% isopropanol wash and spin step was repeated. The filter plate was placed on a clean collection plate (v-bottom 96 well) and 80 μ l of Nanopure water, pH 8.0-8.5 was added. The pH was adjusted with NaOH. The filter plate was secured to the collection plate with tape to ensure that the plate did not slide during the final spin. The plate sat for 5 minutes and was centrifuged for 7 minutes at 2500 rpm. Replicates of samples should be pooled.

Dry-down Process: Concentration of the cDNA probes is preferable so that they can be resuspended in hybridization buffer at the appropriate volume. The volume of the control cDNA (Cy-5) was measured and divided by the number of samples to determine the appropriate amount to add to each test cDNA (Cy-3). Eppendorf tubes were labeled for each test sample and the appropriate amount of control cDNA was allocated into each tube. The test samples (Cy-3) were added to the appropriate tubes. These tubes were placed in a speed-vac to dry down, with foil covering any

windows on the speed vac. At this point, heat (45°C) may be used to expedite the drying process. Samples may be saved in dried form at -20°C for up to 14 days.

Microarray Hybridization: To hybridize labeled cDNA probes to single stranded, covalently bound DNA target genes on glass slide microarrays, the following material were used: formamide, SSC, SDS, 2 µm syringe filter, salmon sperm DNA (Sigma, cat # D-7656), human Cot-1 DNA (Life Technologies, cat # 15279-011), poly A (40 mer: Life Technologies, custom synthesized), yeast tRNA (Life Technologies, cat # 15401-04), hybridization chambers, incubator, coverslips, parafilm, heat blocks. It is preferable that the array is completely covered to ensure proper hybridization.

About 30 µl of hybridization buffer was prepared per cDNA sample (control rat cDNA plus treated rat cDNA). Slightly more than is what is needed should be made since about 100 µl of the total volume made for all hybridizations can be lost during filtration.

Hybridization Buffer:	for 100 µl:
• 50% Formamide	50 µl formamide
• 5X SSC	25 µl 20X SSC
• 0.1% SDS	25 µl 0.4% SDS

The solution was filtered through 0.2 µm syringe filter, then the volume was measured. About 1 µl of salmon sperm DNA (10mg/ml) was added per 100 µl of buffer.

Alternatively, the hybridization buffer was made up as:

Hybridization Buffer:	for 101 µl:
• 50% Formamide	50 µl formamide
• 10X SSC	50 µl 20X SSC
• 0.2% SDS	1 µl 20% SDS

The solution was filtered through 0.2 µm syringe filter, then the volume was measured. One microliter of salmon sperm DNA (9.7mg/ml), 0.5 µl Human Cot-1 DNA

(5 $\mu\text{g}/\mu\text{l}$), 0.5 μl poly A (5 $\mu\text{g}/\mu\text{l}$), 0.25 μl Yeast tRNA (10 $\mu\text{g}/\mu\text{l}$) was added per 100 μl of buffer. The hybridization buffers were compared in validation studies and there was no change in differential gene expression data between the two buffers.

Materials used for hybridization were: 2 Eppendorf tube racks, hybridization chambers (2 arrays per chamber), slides, coverslips, and parafilm. About 30 μl of nanopure water was added to each hybridization chamber. Slides and coverslips were cleaned using N_2 stream. About 30 μl of hybridization buffer was added to dried probe and vortexed gently for 5 seconds. The probe remained in the dark for 10-15 minutes at room temperature and then was gently vortexed for several seconds and then was flash spun in the microfuge. The probes were boiled or placed in a 95 $^{\circ}\text{C}$ heat block for 5 minutes and centrifuged for 3 min at 20800 x g (14000 rpm, Eppendorf model 5417C). Probes were placed in 70 $^{\circ}\text{C}$ heat block. Each probe remained in this heat block until it was ready for hybridization.

About 25 μl was pipetted onto a coverslip. It is highly preferable to avoid the material at the bottom of the tube and to avoid generating air bubbles. This may mean leaving about 1 μl remaining in the pipette tip. The slide was gently lowered, face side down, onto the sample so that the coverslip covered that portion of the slide containing the array. Slides were placed in a hybridization chamber (2 per chamber). The lid of the chamber was wrapped with parafilm and the slides were placed in a 42 $^{\circ}\text{C}$ humidity chamber in a 42 $^{\circ}\text{C}$ incubator. It is preferable to not let probes or slides sit at room temperature for long periods. The slides were incubated for 18-24 hours.

Post-Hybridization Washing: To obtain only single stranded cDNA probes tightly bound to the sense strand of target cDNA on the array, all non-specifically bound cDNA probe should be removed from the array. Removal of all non-specifically bound cDNA probe was accomplished by washing the array and using the following materials: slide holder, glass washing dish, SSC, SDS, and nanopure water. Six glass buffer chambers and glass slide holders were set up with 2X SSC buffer heated to 30-34 $^{\circ}\text{C}$ and used to fill up glass dish to 3/4th of volume or enough to submerge the

microarrays. The slides were placed in 2X SSC buffer for 2 to 4 minutes while the cover slips fall off. The slides were then moved to 2X SSC, 0.1% SDS and soaked for 5 minutes. The slides were transferred into 0.1X SSC and 0.1% SDS for 5 minutes. Then the slides are transferred to 0.1X SSC for 5 minutes. The slides, still in the slide carrier, were transferred into nanopure water (18 megaohms) for 1 second. To dry the slides, the stainless steel slide carriers were placed on micro-carrier plates and spun in a centrifuge (Beckman GS-6 or equivalent) for 5 minutes at 1000 rpm.

The washed and dried hybridized slides were scanned on Axon Instruments Inc. GenePix 4000A MicroArray Scanner and the fluorescent readings from this scanner converted into quantitation files (.gpr) on a computer using GenePix software.

Array Data, Normalization and Transformation: GeneSpring™ software (Version 4.1, Silicon Genetics) was used for statistical analyses including identification of genes expressions correlating with histopathology scores, K-means and tree cluster analysis, and predictive modeling using the *k* nearest neighbor (Predict Parameter Values tool).

Microarray data were loaded into GeneSpring™ software for analysis as GenePix files as above. Specific data loaded into GeneSpring™ software included gene name, GenBank ID control channel mean fluorescence and signal channel mean fluorescence. Expression ratio data (ratio of signal to control fluorescence) were normalized using the 50th percentile of the distribution of all genes and control channel. Ratio data were excluded from analysis if the control channel value was <0. For analysis of correlations and predictive values gene expression ratios were transformed as the log of the ratio.

Correlation with Histopathology Scores: Histopathology scores for each animal (assigned on a compound-dose basis as indicated in Table 1) were entered with gene expression data by using the GeneSpring™ 'Drawn Gene' function. Correlations between inflammation histopathology scores and gene expression were conducted with the distance measures listed below:

standard positive and negative correlation

smooth	positive and negative correlation
change	positive correlation
upregulated	positive correlation
Pearson	positive and negative correlation
Spearman	positive and negative correlation
distance	positive correlation

These correlation or similarity measures are standard statistical correlation measures that are described in the GeneSpring Advanced Analysis Techniques Manual (Release Date March 13, 2001, Silicon Genetics). Where both positive and negative correlations were obtained combined positive and negative correlating gene lists were also created.

The Predict Parameter Values tool in GeneSpring™ software was used for liver inflammation class prediction. The following is a summary of the procedure used in the GeneSpring predictive software. This is described in GeneSpring Advanced Analysis Techniques Manual (Release Date March 13, 2001, Silicon Genetics) with additional information supplied by Silicon Genetics and a statistical expert. The prediction tool relies on standard statistical procedures that can be implemented in a variety of statistical software packages.

Gene Selection: The first step is variable selection of genes to be used for prediction. This entails taking a single gene and a single class (e.g., liver inflammation) and creating a contingency table. In the table below, columns 1 through N of the table each represent one possible cutoff point based on the gene expression level (ratio of signal/control) for that class. The number of possible cutoffs is less than or equal to the total number of samples for the class (e.g., A). It is possibly less than the total number, since there may be ties in gene expression level. Hence, N , M , and X may or may not be distinct. In the example, an n -class problem is illustrated, where x and y entries are the class counts at that gene expression cutoff level, for that specific gene and class, either above ("a") or below ("b") the cutoff. "Class1" is the set of all samples (above or below) the cutoff for Class1, and "!Class1" are all those not in Class1 (above or below) the cutoff, and similarly for the other classes. The class

totals in the training set are the total class marginals used to compute Fisher's exact test.

For a specific gene, and for each class, the best p -value as calculated by Fisher's Exact Test for independence between one of the pair of columns (e.g., 1a and 1b) and the actual class totals (e.g., A) is used to score the gene ($-\ln(p)$ = the score) for that class. Thus, there are N (or, M , Q etc.) contingency tables, where the best score of the N tables is used for that class and gene. If there is a wide disparity between the above and below counts in either the a or b column (this is a two-sided Fisher's Exact Test), the smaller the p -value and the higher the score.

The genes per class are rank ordered by the most discriminating (highest) score. The predictivity list is composed of the most discriminating genes per class. Namely, genes are combined that best discriminate class 1 with those that best discriminate class 2 and so on. The genes are selected in rotation of the highest score per class. Duplicate genes are ignored in the rotation and not added to the list, the gene with the next highest score is taken.

The training samples now have only the gene list garnered from the above procedure. As an example, where once the training samples may have had an initial list of 200 genes per sample, they now have only a subset composed of the gene list, say, 60 (the number of predictivity genes specified) that are selected from the initial list by the gene selections procedure. Thus, each sample is a vector of 60 normalized expression ratios. Since the selection of genes is done in rotation, for 2 classes, the list contains 30 genes for class one, and 30 genes for class two. For 3 classes the list contains 20 genes for class one, 20 for class two, and 20 for class three, etc. The matrix below illustrates the basic features of this gene selection process.

Gene 1	1a	1b	...	Na	Na	
Class	Expression above	Expression below	...	Expression above	Expression below	Actual Class Totals (Marginals)
Class1	x1.1a	x1.1b	...	x1.Na	x1.Nb	A

!Class1	y1.1a	y1.1b	...	y1.Na	y1.Nb	B
Gene 1	1	2	...	M		
Class2	x1.2a	x1.2b	...	x1.Ma		C
!Class2	y1.2a	y1.2b	...	y1.Ma		D
.
Gene 1	1	2	...	Qa	Qb	
Classn	x1.na	x1.nb	...	x1.Qa	x1.Qb	X
!Classn	y1.na	y1.nb	...	y1.Qa	y1.Qb	Y

After the genes to be used in the training set have been selected, the test set is classified based on the *k*-nearest neighbor (*knn*) voting procedure. Using just those genes in the gene list, for each sample in the test set of samples, the *k* nearest neighbors in the training set are found with the Euclidean distance. The class in which each of the *k* nearest neighbors is determined, and the test set sample is assigned to the class with the largest representation in the *k* nearest neighbors after adjusting for the proportion of classes in the training set.

For example, in a two-class problem, let there be 30 samples of class 1 and 60 samples of class 2 in the training set. With $k = 9$ say it can be determined that 7 of the nearest neighbors to a sample from the testing set are in class 1. The sample can then be classified as being a member of class 1. If another sample from the test set has a total of 4 nearest neighbors in class 1, after adjusting for the proportion, this sample would be assigned to class 1 rather than class 2, even though the majority vote suggests assignment to class 2.

The decision threshold is a mechanism to help clearly define the class into which the sample will fall, and can be set to reject classification if the voting is very close or tied. (Thus, *k* can be even for two-class problems without worrying about the tie problem.) A *p*-value is calculated for the proportion of neighbors in each class against the proportions found in the training set, again using Fisher's exact test, but now a one-sided test.

For example, let $k = 11$, if the proportion of neighbors of class 1 in the test set is

6/11, and the proportion of class 1 in a 100 sample training set is 0.4, the p -value calculated is 0.29 (half the two-sided test). If the proportion in the training set is 0.1, the p -value is 0.004. The smaller the p -value the greater the likelihood that the sample from the testing set belongs to that class.

A p -value ratio (P-value) is set as a way of setting the level of confidence in individual sample predictions based on the ratio of p -values for the best class (lowest p -value) versus the second best class (second lowest p -value). For example, if the P-value is set at 0.5 and the ratio of p -values for a particular sample is 0.6, then the predictive model will not make a call for that sample.

Data were each separated into 5 training and test sets by randomly distributing the compounds into the sets. This was accomplished by assigning random numbers to lists of compounds that are negative and positive for histopathology, sorting by random number, and then dividing the sorted lists into a specific number of training and test sets. The training and test set assignments are presented in Table 2.

Liver inflammation classifications were entered for training and test set as a parameter column. Toxicity, as defined by observation of liver necrosis or necrosis with inflammation at 72 hours after treatment, was entered as "negative", "positive-necrosis", or "positive-necrosis with inflammation" for each animal in a compound-dose group. Additionally, a parameter column for random histopathology classification was designated. This was done by randomly assigning the same number of "negative", "positive-necrosis", or "positive-necrosis with inflammation" calls to the individual animals.

The "Predict Parameter Value" tool of GeneSpring was used with each of the training and test sets to generate predictions of histopathology classifications of the test sets. The number of k nearest neighbors was optimized to give the highest predictive accuracy. This was done by first running predictions at different nearest neighbors for three of the training and test sets, and then evaluating the overall predictive performance for each number of nearest neighbors. A P-value ratio cutoff of

0.5 was used. The number of genes used to predict was varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. For each number of genes the numbers of correct calls, incorrect calls and non-calls were recorded. Non-calls are cases where no prediction was made because the P-value ratio exceeded the specified P-value ratio cutoff. Calculations were made for overall percent correct calls (number of correct classifications/number of samples), percent correct calls of called samples (number of correct classifications/number of samples with calls) and percent of called samples (samples with calls/number of samples).

For each input list and optimal number of predictive genes (lowest number of genes giving a maximum overall percent of correct calls) additional information was recorded that included the list of specific genes in the optimum predictive set.

Expression array data were first examined for the existence of genes whose expression correlated with histopathology scores. Table 1 presents a list of the compounds and dose levels along with the liver histopathology classification and histopathology severity scores used for this analysis. For each distance measure the probability was adjusted in increments of 0.05 until at least 50 correlating genes were obtained. Lists of correlating genes were obtained using the distance measures described in Materials and Methods. Example sets of correlating genes are provided in Tables 3 and 4.

The correlating gene lists as well as the entire array gene list were provided as input lists to the GeneSpring Predict Parameter value tool (described in Materials and Methods) that employs a *k* nearest neighbor (*knn*) predictive model. These lists as well as the entire array gene list were used for each of the five training and test sets defined in Materials and Methods to generate predictions of histopathology classifications of the test sets. Input genes for the Predict Parameter Value feature included all 700 genes in the GenePix file (the rat CT Array) which were disclosed in a currently pending application (serial number 10/060,893) filed on January 29, 2002, as well as smaller lists of genes whose expressions correlated with histopathology by the

correlation measures described previously. The number of genes used to predict are varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. The specified number of predictive genes was varied to obtain an optimum number of predictive genes.

After this was done for all 5 training and test sets, all gene lists were then merged to create one aggregate list of predictive genes. Each gene on this aggregate list has predictive value for at least one of the training and test sets because it was observed to contribute to an optimum predictivity for a specific training/test set. The aggregate list was subdivided into smaller lists of genes based on the number of times a gene was predictive for an individual training or test set. For example, if 5 training and test sets were used, genes that were predictive in all 5 training and test sets were designated as Combo (combination) 5. Genes that were predictive in only 4 of 5 training and test sets were designated as Combo 4, etc. A list of predictive genes organized by their occurrence in the separate training and test sets is presented in Table 5. The combination category is the number of training/test set gene lists occurrences.

Example 2

The database used was as described in Example 1.

Array data, normalization procedures and transformations used in these analyses are as described in Example 1. Table 29 presents 24 hour gene expression data for the predictive genes. These data can be used with a k nearest neighbor prediction model (as available in GeneSpring or other statistical software packages) to make predictions as described in this example.

The Predict Parameter Values tool in GeneSpring™ software was used for liver inflammation class prediction. A description of this tool and the statistical procedures used is provided in Example 1.

The training and test data sets used are those described in Table 2 of Example 1.

Liver inflammation classifications used are described in Table 1 of Example 1. In this analysis randomized classifications (same number of "negative", "positive-necrosis", or "positive-necrosis with inflammation" classifications distributed randomly among the samples) were also used.

Prediction Output and Initial Data Processing: For each predicting gene list used for evaluation a table of data generated by the Predict Parameter Values tool in GeneSpring™ software was saved which provided for each sample in the test set the actual call ("negative", "positive-necrosis with inflammation", or "positive-necrosis"), the predicted call ("negative", "positive-necrosis with inflammation", or "positive-necrosis") and the P-value cutoff ratio. This set of data was used to calculate predictive performance measures provided below.

Measures of prediction used for these analyses are generally accepted prediction measures for information about actual and predicted classifications done by a classification system (Modern Applied Statistics with S-Plus, W. N. and B. D. Ripley, Springer, 1994, 3rd edition.; Proc. 14th International Conference on Machine Learning, Miroslav Kubat, Stan Matwin, 1997). Results from predictions of a three class case can be described as a three-class matrix:

		Predicted		
		Class I	Class II	Class III
Actual	Class I	a	b	c
	Class II	d	e	f
	Class III	g	h	i

Class I is defined as "negative-no histopathology."

Class II is defined as "positive-necrosis with inflammation"

Class III is defined as "positive-necrosis".

Standard terms used for prediction for the three class case are:

Overall Accuracy is the proportion of total number of predictions that are correct = $(a + e + i) / (a + b + c + d + e + f + g + h + i)$

False Positive (Inflammation) rate (FPI) is the proportion of cases that are negative for inflammation (Class I or Class III) incorrectly classified as being positive for inflammation (Class II) = $(b + h) / (a + b + c + g + h + i)$

False Negative (Inflammation) rate (FNI) is the proportion of cases correctly classified as being positive for inflammation (Class II) that are incorrectly classified as negative for inflammation (Class I or Class III) = $(d + f) / (d + e + f)$

Geometric-mean is the performance measure that takes into account proportion of positive and negative cases (Kubat et al., *ibid*).

Geometric-mean (Inflammation) (GMM_I), which takes into account the proportion of positive and negative cases for inflammation, equals the square root of $TP_I * TN_I$ where TP_I = True Positive (Inflammation) rate $(e / (d + e + f))$ and TN_I = True Negative (Inflammation) rate $((a + i) / (a + b + c + g + h + i))$.

Geometric-mean (Necrosis) (GMM_N), which takes into account the proportion of positive and negative cases for necrosis, equals the square root of $TP_N * TN_N$ where TP_N = True Positive (Necrosis) rate $((h + i) / (g + h + i))$ and TN_N = True Negative (Necrosis) rate $((a) / (a + b + c))$.

In these analyses cases where no prediction was made because the p-value ratio exceeded the cutoff-value (generally 0.5) the non-call was considered to be incorrect. Non-calls of Class I samples are assumed to be Class II. Non-calls of Class II or Class III samples are assumed to be Class I.

Random Selected Gene Sets: Subsets of randomly selected genes were prepared

from the predictive gene sets to test whether such subsets would have predictive value. Assignments of genes to these subsets are presented in Tables 6-7. Genes were also randomly selected from the list of all genes excluding the 183 twenty-four hour predictive genes (also known as non-predictive genes) by assigning a random number to each gene, sorting by the random number and selecting the appropriate number of sorted genes. Assignments of genes to these subsets are presented in Table 8. The "*" identifies that the genes randomly selected from the Combo All list of predictive genes (183 genes) assigning a random number to each gene, sorting by the random number and selecting the appropriate number of sorted genes.

Results: Prediction results for 24 hour expression data using genes identified as predictive are presented in Table 9. Referring now to Table 9, "" denotes that values are given as means and range of values (in parentheses) for five training/test sets using 24 hour array data and gene lists as presented in Table 5. Unit of prediction was the animal and the predictive classification was for liver inflammation or necrosis observed at 72 hours after treatment.

"" denotes that standard prediction measures were used as defined in Materials and Methods above. These include:

Overall Accuracy = Proportion of total number of predictions that are correct; FP_I = False Positive (Inflammation) rate, the proportion of negative cases for inflammation that are incorrectly classified as positive for inflammation; FN = False Negative (Inflammation) rate, the proportion of positive cases for inflammation that are incorrectly classified as negative; GMM = Geometric Mean (Inflammation), performance measure that takes into account the proportion of positive and negative cases for inflammation; GMM_N = Geometric Mean (Necrosis), performance measure that takes into account the proportion of positive and negative cases for necrosis. Non-calls are counted as incorrect predictions as defined in Materials and Methods.

These data indicate a high accuracy in predicting liver inflammation. Mean accuracies were 0.85 (85% accuracy) or better for the entire predictive gene list

(Combo All) and the top two Combo gene lists (Combo 5 and Combo 3), and were close to 0.80 (80% accuracy) for the remaining Combo gene lists (Combo 2 and Combo 1). Because these predictions were conducted with multiple training/test set combinations it is possible to obtain an indication of the variability in prediction rates and robustness of the prediction capabilities of these gene sets. For the Combo All and other Combo lists the minimum predictive accuracy value for any one training and test set was greater than 0.70 (70%), with most lists giving 0.75 (75%) or better minimum accuracy. False positive and false negative prediction rates for inflammation (FP_I and FN_I , respectively) were generally low with means generally 0.17 (17%) or less for the Combo All, 5, and 3 gene sets.

The Geometric Mean (Inflammation) (GMM_I) was used as an indication of predictive performance that includes consideration of the proportion of positive and negative cases for inflammation. All gene sets gave GMM_I measures >0.75 (75%), and the Combo All, Combo 5, and Combo 3 gene sets had GMM_I measures >0.85 . The Geometric Mean (Necrosis) (GMM_N) was used as an indication of predictive performance that includes consideration of the proportion of positive and negative cases for necrosis. All gene sets gave GMM_N measures >0.80 (80%). Together, both GMM measures indicate that the 24 hour gene sets can predict samples with necrosis or samples with necrosis with inflammation.

As described above, in those cases where no prediction was made because the p-value ratio exceeded the cutoff-value (generally 0.5) the non-call was considered to be incorrect.

Prediction results for 24 hour expression data using genes identified as predictive and the predicting unit of compound-dose are presented in Table 10. Referring now to Table 10, the "***" denotes that overall accuracy is defined as the proportion of the total number of predictions that are correct. Non-Calls are counted as incorrect predictions as defined in Materials and Methods. This prediction unit is probably the most relevant for toxicology prediction. The performance of the genes in predicting compound-dose

toxicity is even better than predictions on an individual animal basis. These data indicate a high accuracy in predicting liver inflammation. Mean accuracy exceeded 0.86 (86% accuracy) for the entire predictive gene list (Combo All) as well as Combo 5 and Combo 3, and was greater than 0.80 (80% accuracy) for Combo 2 and Combo 1. Variability in accuracy was low for most of the gene lists with >0.7 (70%) minimum accuracy for any single training and test set observed for the Combo All and Combo 5, 3, 2 and 1 gene lists.

One noteworthy feature of the predictive capability is the ability to distinguish between effects of a compound at different dose levels. Five compounds (ANIT, APAP, CCL4, LPS, and TET) produced liver necrosis or necrosis with inflammation at the high dose but not at the low dose. The predictive gene sets were usually accurate in predicting toxicity at the high dose and predicting no toxicity at the low dose.

Prediction results for 24 hour expression data using genes identified as predictive and the predicting unit is compound are presented in Table 11. Referring to Table 11, "***" denotes Overall Accuracy to be defined as the proportion of the total number of predictions that are correct. Non-Calls are counted as incorrect predictions as defined in Materials and Methods. Predictive performances on a compound basis were also good, with accuracies generally being at or above 0.8 (80%).

Table 12 and 13 show the level of predictive accuracy of individual genes of Combos 3 and 2, respectively, for 24 hour liver data. The tables show that overall, individual genes of the Combo groups did not perform as well as the combination as a whole, as the average predictive accuracy of individual genes versus the entire combo set was 64.6% vs. 84.9% for Combo 3, and 64.9% vs. 79.3% for Combo 2. The table also shows that while many of the individual genes of the Combo groups were predictive (e.g., accuracies as high as 77.5% for individual genes of Combo 3 and 85.9% for Combo 2), the predictive accuracy of individual genes rarely exceeded the predictive accuracy of the whole combination.

In order to assess the performance of subsets of genes, predictive performance

was evaluated for subsets of genes randomly selected from the total combined predictive list (Combo All) and the top Combo sets (as defined in Materials and Methods). Prediction results for 24 hour expression data using randomly selected subsets of genes are presented in Table 14. Referring to Table 14, "***" denotes the combo gene lists as in Table 5. For combo lists all genes were used or randomly selected subsets of genes in Table 6 and Table 7. Referring now to Table 6, the genes were randomly selected from the Combo All list of predictive genes (183 genes) assigning a random number to each gene, sorting by the random number and selecting the appropriate number of sorted genes. Referring now to Table 7, the genes were randomly selected from the combined Combo 5 3 2 list of predictive genes (52 genes) assigning a random number to each gene, sorting by the random number and selecting the appropriate number of sorted genes. Referring now to Table 14, All-Pred used genes randomly selected from genes that were present on the array but not in the predictive list. "*** Overall Accuracy" is defined as the proportion of the total number of predictions that are correct. Non-calls are counted as incorrect predictions as defined in Materials and Methods. Accuracy was calculated for correct classifications of "negative," "positive-necrosis with inflammation," or "positive-necrosis," assigned to the samples and for randomized classifications in the same proportions as the correct classifications. Values presented are the mean accuracy values for 5 training/test sets with minimum and maximum accuracy values. These data clearly indicate that smaller subsets of the Combo gene lists have predictive power. Table 14 also compares prediction accuracy for correct classification of liver inflammation and for the same proportion of positive and negative toxicity calls randomly assigned to the samples (random classification). For each gene set or subset predictions were made using the same five training/test sets as for the other prediction analyses. Additionally, sets of genes were randomly chosen from the array which were not identified on the list of 183 predictive genes at 24 hour (Example 1, Table 5).

It is clear from these data that the predictions with accurate classification are much better than predictions with randomized classification. This means that the predictive

results are not simply due to chance and large data sets but are due to significant, meaningful predictive association between the gene expression of the predictive genes and the liver inflammation. The accuracy numbers for the gene sets selected from a list of all genes on the array minus the predictive genes are much lower than the Combo predictive lists and the random subsets of these predictive lists. This also verifies the predictive power of the identified predictive genes. The fact that the predictive numbers from these subsets are somewhat higher for accurate than random classification is likely due to some residual predictivity in these genes that is not very substantial.

Example 3

Compounds and treatments list used to construct the liver database are given in Table 1 of Example 1. This table also provides the evaluation of liver toxicity as observed as necrosis or necrosis with inflammation in samples collected 72 hours after treatment. The database is described in detail in Example 1. This Example analyzes expression data from samples collected 6 hours after treatment.

Array data, normalization and transformation procedures used were as described in Example 1.

Procedures and methods for obtaining gene lists correlating with histopathology scores were as described in Example 1.

The Predict Parameter Values tool in GeneSpring™ software used for liver inflammation class prediction is described in detail in Material and Methods of Example 1.

Data were each separated into 5 training and test sets by randomly distributing the compounds into the sets. This was accomplished by assigning random numbers to lists of compounds that are negative and positive for histopathology, sorting by random number, and then dividing the sorted lists into a specific number of training and test sets. The training and test set assignments are presented in the following

Table 15. Referring to Table 15, Low + defines low dose. High* defines high dose. Compounds* abbreviates for Compound, Dose, Abbreviation, etc, are defined in Table 1. **Negative are compounds that did not elicit histopathology (score=1). **Positive are compounds that did elicit histopathology (score of 2 or greater).

Liver inflammation classifications were entered for training and test sets as a parameter column. Toxicity, as defined by observation of liver necrosis or necrosis with inflammation at 72 hours after treatment, was entered as "negative", "positive-necrosis", or "positive-necrosis with inflammation" for each animal in a compound-dose group. Additionally, a parameter column for random histopathology classification was designated. This was done by randomly assigning the same number of "negative", "positive-necrosis", or "positive-necrosis with inflammation" calls to the individual animals.

The "Predict Parameter Value" tool of GeneSpring was used with each of the training and test sets to generate predictions of histopathology classifications of the test sets. The number of k nearest neighbors was optimized to give the highest predictive accuracy. This was done by first running predictions at different nearest neighbors for three of the training and test sets, and then evaluating the overall predictive performance for each number of nearest neighbors. A P-value ratio cutoff of 0.5 was used. The number of genes used to predict was varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. For each number of genes the numbers of correct calls, incorrect calls and non-calls were recorded. Non-calls are cases where no prediction was made because the P-value ratio exceeded the specified P-value ratio cutoff. Calculations were made for overall percent correct calls (number of correct classifications/number of samples), percent correct calls of called samples (number of correct classifications/number of samples with calls) and percent of called samples (samples with calls/number of samples).

For each input list and optimal number of predictive genes (lowest number of genes giving a maximum overall percent of correct calls) additional information was

recorded that included the list of specific genes in the optimum predictive set.

Results: Expression array data were first examined for the existence of genes whose expression correlated with histopathology scores. Table 1 in Materials and Methods of Example 1 presents a list of the compounds and dose levels along with the liver histopathology classification and histopathology severity scores used for this analysis. For each distance measure the probability was adjusted in increments of 0.05 until at least 50 correlating genes were obtained. Lists of correlating genes were obtained using the distance measures described in Materials and Methods. Example sets of correlating genes are provided in Tables 16-17.

The correlating gene lists as well as the entire array gene list were provided as input lists to the GeneSpring Predict Parameter value tool (described in Materials and Methods) that employs a *k* nearest neighbor (*knn*) predictive model. These lists as well as the entire array gene list were used for each of the five training and test sets defined in Materials and Methods to generate predictions of histopathology classifications of the test sets. Input genes for the Predict Parameter Value feature included all 700 genes in the GenePix file (the Rat CT Array) as well as smaller lists of genes whose expressions correlated with histopathology by the correlation measures described previously. The number of genes used to predict are varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. The specified number of predictive genes was varied to obtain an optimum number of predictive genes.

After this was done for all 5 training and test sets, all gene lists were then merged to create one aggregate list of predictive genes. Each gene on this aggregate list has predictive value for at least one of the training and test sets because it was observed to contribute to an optimum predictivity for a specific training/test set. The aggregate list was subdivided into smaller lists of genes based on the number of times a gene was predictive for an individual training or test set. For example, if 5 training and test sets were used, genes that were predictive in all 5 training and test sets were designated as Combo (combination) 5. Genes that were predictive in only 4 of 5

training and test sets were designated as Combo 4, etc.

A list of predictive genes organized by their occurrence in the separate training and test sets is presented in Table 18. Referring now to Table 18, the Combination (No. of Occurrences) category, refers to the number of training/test set gene list occurrences.

Example 4

Materials and Methods: The database used was as described in Example 1. This Example analyzes expression data from samples collected 6 hours after treatment

Array Data, Normalization and Transformation: Array data, normalization procedures and transformations used in these analyses are as described in Example 1. Table 28 lists 6 hour gene expression data for the predictive genes. These data can be used with a k nearest neighbor prediction model (as available in GeneSpring or other statistical software packages) to make predictions as described in this example

Class Prediction: The Predict Parameter Values tool in GeneSpring™ software was used for liver inflammation class prediction. A description of this tool and the statistical procedures used is provided in Example 1.

Training and Test Data Sets: The training and test data sets used are those described in Table 15 of Example 3.

Liver Toxicology Classification: Liver inflammation classifications used are described in Table 1 of Example 1. In this analysis randomized classifications (same number of "negative", "positive-necrosis", or "positive-necrosis with inflammation" classifications distributed randomly among the samples) were also used.

Prediction Output and Initial Data Processing: For each gene list prediction used for evaluation a table of data generated by the Predict Parameter Values tool in GeneSpring™ software was saved which provided for each sample in the test set the

actual call ("negative", "positive-necrosis with inflammation", or "positive-necrosis"), the predicted call ("negative", "positive-necrosis with inflammation", or "positive-necrosis") and the P-value cutoff ratio. This set of data was used to calculate predictive performance measures provided below.

Prediction Measures: Accuracy was calculated as described in Example 2.

Results: Prediction results for 6 hour expression data using genes identified as predictive are presented in Table 19 where comparison of predictive performance for correct and random classification is shown. Referring to Table 19, Gene List* is defined as Combo Gene Lists as in Table 18. ** Overall Accuracy = proportion of the total number of predictions that are correct. Non-calls are counted as incorrect predictions as defined in Materials and Methods. Accuracy was calculated for correct classifications of "negative", "positive-necrosis with inflammation", or "positive-necrosis" assigned to the samples and for randomized classifications in the same proportions as the correct classifications. Values presented are the mean accuracy values for 5 training/test sets with minimum and maximum accuracy values.

It is clear from these data that the predictions with accurate classification are much better than predictions with randomized classification. This means that the predictive results are not simply due to chance and large data sets but are due to significant, meaningful predictive association between the gene expression of the predictive genes and the liver inflammation.

Example 5

Materials and Methods: Database: Compounds and Liver inflammation: Compounds and treatments list used to construct the liver database are given in Table 1 of Example 1. This table also provides the evaluation of the liver inflammation observed in samples collected 72 hours after treatment. The database is described in detail in Example 1. This Example analyzes expression data from samples collected 72 hours after treatment.

Array data, normalization and transformation procedures used were as described in Example 1.

Procedures and methods for obtaining gene lists correlating with histopathology scores were as described in Example 1 with scores as in Example 1, Table 1.

The Predict Parameter Values tool in GeneSpring™ software used for liver inflammation class prediction is described in detail in Material and Methods of Example 1.

Training and Test Data Sets: Data were each separated into 5 training and test sets by randomly distributing the compounds into the sets. This was accomplished by assigning random numbers to lists of compounds that are negative and positive for histopathology, sorting by random number, and then dividing the sorted lists into a specific number of training and test sets. The training and test set assignments are presented in the Table 20.

Liver Toxicology Classification: Liver inflammation classifications were entered for training and test set as a parameter column. Toxicity, as defined by observation of liver necrosis or necrosis with inflammation at 72 hours after treatment, was entered as "negative", "positive-necrosis", or "positive-necrosis with inflammation" for each animal in a compound-dose group. Additionally, a parameter column for random histopathology classification was designated. This was done by randomly assigning the same number of "negative", "positive-necrosis", or "positive-necrosis with inflammation" calls to the individual animals.

Prediction Output and Initial Data Processing: The "Predict Parameter Value" tool of GeneSpring was used with each of the training and test sets to generate predictions of histopathology classifications of the test sets. The number of k nearest neighbors was optimized to give the highest predictive accuracy. This was done by first running predictions at different nearest neighbors for three of the training and test sets, and then evaluating the overall predictive performance for each number of nearest

neighbors. A P-value ratio cutoff of 0.5 was used. The number of genes used to predict was varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. For each number of genes the numbers of correct calls, incorrect calls and non-calls were recorded. Non-calls are cases where no prediction was made because the P-value ratio exceeded the specified P-value ratio cutoff. Calculations were made for overall percent correct calls (number of correct classifications/number of samples), percent correct calls of called samples (number of correct classifications/number of samples with calls) and percent of called samples (samples with calls/number of samples).

For each input list and optimal number of predictive genes (lowest number of genes giving a maximum overall percent of correct calls) additional information was recorded that included the list of specific genes in the optimum predictive set.

Results: Expression array data were first examined for the existence of genes whose expression correlated with histopathology scores. Table 1 in Materials and Methods of Example 1 presents a list of the compounds and dose levels along with the liver histopathology classification and histopathology severity scores used for this analysis. For each distance measure the probability was adjusted in increments of 0.05 until at least 50 correlating genes were obtained. Lists of correlating genes were obtained using the distance measures described in Materials and Methods. Example sets of correlating genes are provided in Tables 21-22.

The correlating gene lists as well as the entire array gene list were provided as input lists to the GeneSpring Predict Parameter value tool (described in Materials and Methods) that employs a *k* nearest neighbor (*knn*) predictive model. These lists as well as the entire array gene list were used for each of the five training and test sets defined in Materials and Methods generate predictions of histopathology classifications of the test sets. Input genes for the Predict Parameter Value feature included all 700 genes in the GenePix file (the Rat CT Array) as well as smaller lists of genes whose expressions correlated with histopathology by the correlation measures described

previously. The number of genes used to predict are varied with standard numbers of 50, 40, 30, 20, 10, 5, 2 and 1 genes used. The specified number of predictive genes was varied to obtain an optimum number of predictive genes.

After this was done for all 5 training and test sets, all gene lists were then merged to create one aggregate list of predictive genes. Each gene on this aggregate list has predictive value for at least one of the training and test sets because it was observed to contribute to an optimum predictivity for a specific training/test set. The aggregate list was subdivided into smaller lists of genes based on the number of times a gene was predictive for an individual training or test set. For example, if 5 training and test sets were used, genes that were predictive in all 5 training and test sets were designated as Combo (combination) 5. Genes that were predictive in only 4 of 5 training and test sets were designated as Combo 4, etc.

A list of predictive genes organized by their occurrence in the separate training and test sets is presented in Table 23. Referring to Table 23, Combination (No. of occurrences) is defined as the number of training/test set gene list occurrences.

Example 6 Predictive Properties and Evaluation of Predictive Genes for Liver inflammation from 72 Hour Expression Data: Materials and Methods: Database: The database used was as described in Example 1.

Array Data, Normalization and Transformation: Array data, normalization procedures and transformations used in these analyses are as described in Example 1. Table 30 presents 72 hour gene expression data for the predictive genes. These data can be used with a k nearest neighbor prediction model (as available in GeneSpring or other statistical software packages) to make predictions as described in this example.

Class Prediction: The Predict Parameter Values tool in GeneSpring™ software was used for liver inflammation class prediction. A description of this tool and the statistical procedures used is provided in Example 1.

Training and Test Data Sets: The training and test data sets used are those described in the table of Example 5.

Liver Toxicology Classification: Liver inflammation classifications used are described in Table 1 of Example 1. In this analysis randomized classifications (same number of "negative", "positive-necrosis with inflammation", or "positive-necrosis" classifications distributed randomly among the samples) were also used.

Prediction Output and Initial Data Processing: For each gene list prediction used for evaluation a table of data generated by the Predict Parameter Values tool in GeneSpring™ software was saved which provided for each sample in the test set the actual call ("negative", "positive-necrosis with inflammation", or "positive-necrosis"), the predicted call ("negative", "positive-necrosis with inflammation", or "positive-necrosis") and the P-value cutoff ratio. This set of data was used to calculate predictive performance measures provided below. Accuracy was calculated as described in Example 2.

Results: Prediction results for 72 hour expression data using genes identified as predictive are presented in Table 24 in which comparison of predictive performance for correct and random classification is shown. Referring to Table 24, the "Gene List" is derived from Combo Gene Lists as in Table 23. The "Overall Accuracy" is defined as the proportion of the total number of predictions that are correct. Non-calls are counted as incorrect predictions as defined in Materials and Methods. Accuracy was calculated for correct classifications of "negative", "positive-necrosis with inflammation", or "positive-necrosis" assigned to the samples and for randomized classifications in the same proportions as the correct classifications. Values presented are the mean accuracy values for 5 training/test sets with minimum and maximum accuracy values.

It is clear from these data that the predictions with accurate classification are much better than predictions with randomized classification. This means that the predictive results are not simply due to chance and large data sets but are due to significant, meaningful predictive association between the gene expression of the predictive

genes and the liver inflammation.

Example 7 Alternate Models for Predicting Liver Inflammation

Predictive Modeling: The predictive task with the liver inflammation gene expression data is a three-class classification problem, where the three classes of possible responses are defined as "positive-necrosis with inflammation", "positive-necrosis", or "no histopathology". This is an uneven class problem in that the class of negative responses is roughly 80 percent of the data or more in the database tested. A discrimination function can be used to classify a training set. This function can be cross-validated with a testing set, often repeatedly to quantify the mean and variation of the classification error. There are numerous common discrimination functions, and a comparative study of the performance of these functions is useful in determining the best classifier. Additional measures can then be used to compare the performance of the classifiers. Since the classes are of significantly uneven sizes, use a geometric mean measure (*GMM*) can be used to compare models, namely, the square root of the product of the true positives and the true negatives.

Common discrimination methods are Fisher's linear discriminant, quadratic discriminant (mahalanobis distance), *k*-nearest neighbors (*knn*), logistic discriminant (MacLachlan, "Discriminant Analysis and Statistical Pattern Recognition", Wiley Series in Probability and Mathematical Statistics, 1992), classification trees (or more generally known as recursive partitioning) (Breiman et al., "Classification and Regression Trees", Chapman & Hall, 1984; Clark and Pregibon in "Tree-Based Models" (J.M. Chambers and T.J. Hastie, eds.) Chp. 9, Chapman & Hall Computer Science Series, 1993; Quinlan and Kaufman, "C4.5: Programs for Machine Learning", 1988), and neural network classifiers (Ripley, "Pattern Recognition and Neural Networks", Cambridge University Press, 1996). Most are formula-based such as linear and quadratic discriminant, whereas others are rule-based, such as recursive partitioning, or algorithmically based, such as *knn*. *knn* is also database dependent in that a database containing training set is needed to perform nearest neighbor search

and classification.

Classifier Models: A variety of common classification techniques are available. A simple hybrid classifier could be designed and tested, using the *knn* results, to transform the *knn* model into a database independent model. This model is termed a *centroid* model. The centroid model uses the correctly identified test data results from *knn* and locates a centroid of the subset of *k* samples that are of the same class for each correctly identified test sample. The centroid is assigned the correct class, and with new test data, a sample is assigned the class of its nearest centroid.

In addition to the *knn* and centroid models described above, tree, centroid, logistic, and neural network models could also be employed. The neural network is a simple, feed-forward network, allowing skip layers, and with an entropy fitting criterion.

It is understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims. All publications, patents and patent applications cited herein are hereby incorporated by reference in their entirety for all purposes to the same extent as if each individual publication, patent or patent application were specifically and individually indicated to be so incorporated by reference.

Table 1 Compounds, Dose Levels, Liver Pathology and Abbreviations in the database						
Compound	Dose Level	Abbrev.*	Liver Inflammation	Inflamm. Score**	Liver Necrosis	Necr. Score**
1-naphthylisothiocyanate	15mg/kg	ANIT 15	no	1	no	1
1-naphthylisothiocyanate	60mg/kg	ANIT 60	yes	2	yes	2
5-fluorouracil	13 mg/kg	5-FU 13	no	1	no	1
5-fluorouracil	50 mg/kg	5-FU 50	no	1	no	1
acetaminophen	250 mg/kg	APAP 250	no	1	no	1
acetaminophen	1000 mg/kg	APAP 1000	no	1	yes	2
aflatoxin	1 mg/kg	AFLB 1	yes	4	yes	8
amphotericin B	5 mg/kg	AMPB 5	no	1	no	1
amphotericin B	20 mg/kg	AMPB 20	no	1	no	1
azathioprine	50 mg/kg	AZA 50	no	1	no	1
azathioprine	200 mg/kg	AZA 200	no	1	no	1
benzene	0.25 ml/kg	BEN 250	no	1	no	1
benzene	1 ml/kg	BEN 1000	no	1	no	1
benzo[a]pyrene	30 mg/kg	BAP 30	no	1	no	1
bromobenzene	0.2 ml/kg	BRB 200	yes	2	yes	2
bromobenzene	0.8 ml/kg	BRB 800	yes	3	yes	4
busulfan	14 mg/kg	BUS 14	no	1	no	1
cadmium chloride	1 mg/kg	CAD 1	no	1	no	1
cadmium chloride	2 mg/kg	CAD 2	no	1	no	1
cadmium chloride	4 mg/kg	CAD 4	yes	2	yes	3
carbon tetrachloride	0.25 ml/kg	CCL4 250	no	1	yes	3
carbon tetrachloride	1 ml/kg	CCL4 1000	yes	3	yes	6
carmustine	16 mg/kg	CAR 16	no	1	no	1
chloroform	0.25 ml/kg	CHCL3 250	no	1	no	1
chloroform	0.5 ml/kg	CHCL3 500	no	1	no	1
chlorpromazine	8 mg/kg	CHLOR 8	no	1	no	1
chlorpromazine	30 mg/kg	CHLOR 30	no	1	no	1
cisplatin	2.5 mg/kg	CIS 2.5	no	1	no	1
cisplatin	10 mg/kg	CIS 10	no	1	no	1

clofibrate	75 mg/kg	CLO 75	no	1	no	1
clofibrate	250 mg/kg	CLO 250	no	1	no	1
clozapine	45 mg/kg	CLOZ 45	no	1	no	1
clozapine	180 mg/kg	CLOZ 180	no	1	no	1
carboxy methyl cellulose	30 mg/kg	CMC 30	no	1	no	1
cycloheximide	0.5 mg/kg	CHEX 0.5	no	1	no	1
cycloheximide	2 mg/kg	CHEX 2	no	1	no	1
cyclophosphamide	25 mg/kg	CPHOS 25	no	1	no	1
cyclophosphamide	100 mg/kg	CPHOS 100	no	1	no	1
cyclosporin A	20 mg/kg	CYCA 20	no	1	no	1
cyclosporin A	80 mg/kg	CYCA 80	no	1	no	1
dexamethasone	8 mg/kg	DEX 8	no	1	no	1
dexamethasone	30 mg/kg	DEX 30	no	1	no	1
diflunisal	25 mg/kg	DIF 25	no	1	no	1
diflunisal	100 mg/kg	DIF 100	no	1	no	1
dimethylnitrosamine	20 mg/kg	DMN 20	yes	4	yes	9
doxorubicin	12 mg/kg	DOX 12	no	1	no	1
erythromycin estolate	40 mg/kg	ERY 40	no	1	no	1
erythromycin estolate	160 mg/kg	ERY 160	no	1	no	1
estradiol	0.1 mg/kg	EST 0.1	no	1	no	1
estradiol	0.4 mg/kg	EST 0.4	no	1	no	1
ethanol	2.5 ml/kg	ETH 2500	no	1	no	1
gancyclovir	50 mg/kg	GAN 50	no	1	no	1
gancyclovir	200 mg/kg	GAN 200	no	1	no	1
gentamicin	38 mg/kg	GEN 38	no	1	no	1
gentamicin	150 mg/kg	GEN 150	no	1	no	1
hydroxyurea	250 mg/kg	HYD 250	no	1	no	1
hydroxyurea	1000 mg/kg	HYD 1000	no	1	no	1
isoniazid	50 mg/kg	ISON 50	no	1	no	1

isoniazid	200 mg/kg	ISON 200	no	1	no	1
ketoconazole	20 mg/kg	KETO 20	no	1	no	1
ketoconazole	80 mg/kg	KETO 80	no	1	no	1
lipopolysaccharide	2 mg/kg	LPS 2	no	1	no	1
lipopolysaccharide	8 mg/kg	LPS 8	yes	2	yes	6
methotrexate	1.3 mg/kg	MET 1.3	no	1	no	1
methotrexate	5 mg/kg	MET 5	no	1	no	1
naloxone	45 ml/kg	NAL 45	no	1	no	1
naloxone	180 mg/kg	NAL 180	no	1	no	1
phenobarbital	20 mg/kg	PBARB 20	no	1	no	1
phenobarbital	80 mg/kg	PBARB 80	no	1	no	1
phenylhydrazine	20 mg/kg	PHEN 20	no	1	no	1
phenylhydrazine	80 mg/kg	PHEN 80	no	1	no	1
polyethylene glycol	5 ml/kg	PEG 5000	no	1	no	1
puromycin	38 mg/kg	PUR 38	no	1	no	1
puromycin	150 mg/kg	PUR 150	no	1	no	1
quinidine	25 mg/kg	QUIN 25	no	1	no	1
quinidine	100 mg/kg	QUIN 100	no	1	no	1
streptozotocin	20 mg/kg	STRZ 20	no	1	no	1
streptozotocin	75 mg/kg	STRZ 75	no	1	no	1
tamoxifen	50 mg/kg	TAM 50	no	1	no	1
tamoxifen	200 mg/kg	TAM 200	no	1	no	1
tetracycline	50 mg/kg	TET 50	no	1	no	1
tetracycline	150 mg/kg	TET 150	no	1	yes	2
theophylline	25 mg/kg	THEO 25	no	1	no	1
theophylline	100 mg/kg	THEO 100	no	1	no	1

Table 2 Distribution of Compounds* in Individual Training and Test Sets
for 24h Liver Inflammation Data

Training and Test Set 1

Training Set 1 Negative**	Training Set 1 Positive**- Necrosis	Training Set 1 Positive**- Necrosis with Inflammation	Test Set 1 Negative**	Test Set 1 Positive**- Necrosis	Test Set 1 Positive**- Necrosis with Inflammation
BAP-Low ⁺	APAP-High ⁺	BRB-Low ⁺	ISON-Low ⁺	TET-High ⁺	BRB-High ⁺
KETO-Low	CCL4-Low	CCL4-High	TAM-Low		LPS-High
DOX-Low		ANIT-High	CYCA-Low		
STRZ-High		DMN-High	DIF-Low		
ERY-High			CHEX-High		
PEG-Low			CMC-Low		
PUR-High			HYD-Low		
CHLOR-High			ANIT-Low		
HYD-High			CHEX-Low		
GEN-High			APAP-Low		
BEN-High			CHCL3-High		
ETH-Low			DIF-High		
DOX-High			PHEN-High		
PBARB-High			GAN-Low		
BUS-Low			CYCA-High		
5-FU-Hi			TAM-High		
MET-Low			DEX-High		
EST-High			CIS-High		
PHEN-Low			PUR-Low		
THEO-Low			AMPB-Low		
QUIN-Low			CLO-High		
GEN-Low			EST-Low		
CIS-Low			CLOZ-Low		
CLO-Low			CAD-Low		
BUS-High			CHLOR-Low		
CAR-Low					
LPS-Low					
CPHOS-High					
THEO-High					
NAL-High					
DEX-Low					
NAL-Low					
AMPB-Hi					

5-FU-Low					
CAD-High					
ISON-High					
STRZ-Low					
CLOZ-High					
TET-Low					
KETO-High					
PBARB-Low					
CHCL3-Low					
BAP-High					
CPHOS-Low					
MET-High					
QUIN-High					
CAR-High					
ERY-Low					
GAN-High					
BEN-Low					

Training and Test Set 2

Training Set 2 Negative	Training Set 2 Positive- Necrosis	Training Set 2 Positive- Necrosis with Inflammation	Test Set 2 Negative	Test Set 2 Positive- Necrosis	Test Set 2 Positive- Necrosis with Inflammation
PHEN-Low	APAP-High	DMN-High	PUR-High	CCL4-Low	CCL4-High
ISON-High	TET-High	BRB-High	KETO-Low		ANIT-High
PHEN-High		BRB-Low	CLOZ-Low		
BEN-Low		LPS-High	ERY-High		
CYCA-Low			CAR-High		
KETO-High			CAD-High		
CLOZ-High			PBARB-High		
PBARB-Low			5-FU-Low		
CMC-Low			CAR-Low		
CHLOR-Low			DEX-Low		
NAL-Low			STRZ-Low		
EST-High			CLO-Low		
CHCL3-Low			ANIT-Low		
DOX-High			THEO-Low		
5-FU-Hi			BAP-High		
CPHOS-Low			CYCA-High		
DEX-High			MET-Low		
DIF-High			THEO-High		
ERY-Low			ISON-Low		

APAP-Low			MET-High		
CIS-Low			CHEX-Low		
CLO-High			LPS-Low		
BUS-High			GEN-Low		
BUS-Low			CHCL3-High		
DOX-Low			GEN-High		
DIF-Low					
CAD-Low					
STRZ-High					
HYD-Low					
BAP-Low					
CIS-High					
ETH-Low					
BEN-High					
QUIN-High					
PUR-Low					
HYD-High					
EST-Low					
AMPB-Low					
GAN-Low					
NAL-High					
CHEX-High					
CHLOR-High					
GAN-High					
CPHOS-High					
TAM-Low					
TET-Low					
TAM-High					
AMPB-Hi					
QUIN-Low					
PEG-Low					

Training and Test Set 3

Training Set 3 Negative	Training Set 3 Positive- Necrosis	Training Set 3 Positive- Necrosis with Inflammation	Test Set 3 Negative	Test Set 3 Positive- Necrosis	Test Set 3 Positive- Necrosis with Inflammation
ERY-High	TET-High	BRB-Low	PUR-High	APAP-High	BRB-High
EST-High	CCL4-Low	CCL4-High	CPHOS-Low		LPS-High
ISON-Low		ANIT-High	BEN-High		
ANIT-Low		LPS-High	HYD-High		

CLO-Low			CMC-Low		
CLOZ-Low			CLO-High		
DIF-Low			GAN-Low		
CAR-Low			DOX-High		
LPS-Low			CHEX-Low		
CIS-High			THEO-Low		
TAM-High			AMPB-Hi		
CYCA-High			DOX-Low		
MET-Low			CHEX-High		
NAL-Low			GEN-High		
CPHOS-High			DEX-Low		
CAR-High			BUS-High		
HYD-Low			PUR-Low		
APAP-Low			PBARB-Low		
GEN-Low			5-FU-Low		
AMPB-Low			QUIN-Low		
PHEN-Low			STRZ-Low		
BAP-High			ISON-High		
EST-Low			ETH-Low		
CHCL3-High			STRZ-High		
CAD-High			DEX-High		
PHEN-High					
TET-Low					
CLOZ-High					
BEN-Low					
CHLOR-High					
TAM-Low					
DIF-High					
BUS-Low					
KETO-High					
5-FU-Hi					
MET-High					
ERY-Low					
QUIN-High					
BAP-Low					
KETO-Low					
THEO-High					
PBARB-High					
CYCA-Low					
NAL-High					
CIS-Low					
PEG-Low					
CHLOR-Low					
GAN-High					
CHCL3-Low					
CAD-Low					

Training and Test Set 4

Training Set 4 Negative	Training Set 4 Positive- Necrosis	Training Set 4 Positive- Necrosis with Inflammation	Test Set 4 Negative	Test Set 4 Positive- Necrosis	Test Set 4 Positive- Necrosis with Inflammation
CHEX-Low	APAP-High	LPS-High	AMPB-Low	TET-High	BRB-High
5-FU-Low	TET-High	DMN-High	PHEN-Low		LPS-High
BEN-High		ANIT-High	DIF-Low		
QUIN-Low		BRB-Low	APAP-Low		
ERY-Low			CAD-High		
ETH-Low			GAN-Low		
CYCA-High			HYD-High		
KETO-High			TAM-High		
GEN-Low			DOX-Low		
BAP-High			GEN-High		
PEG-Low			PHEN-High		
BAP-Low			TET-Low		
CMC-Low			MET-High		
BUS-High			CHEX-High		
BUS-Low			DOX-High		
THEO-High			STRZ-High		
CYCA-Low			PBARB-High		
DEX-High			CLO-High		
QUIN-High			KETO-Low		
ERY-High			BEN-Low		
DEX-Low			5-FU-Hi		
EST-High			ISON-Low		
CAR-High			CAD-Low		
CHLOR-Low			CIS-Low		
MET-Low			PUR-High		
CHLOR-High					
CAR-Low					
AMPB-Hi					
CPHOS-High					
CLO-Low					
NAL-Low					
HYD-Low					
ANIT-Low					
ISON-High					
EST-Low					
CIS-High					

CHCL3-High					
NAL-High					
GAN-High					
CLOZ-High					
LPS-Low					
CLOZ-Low					
THEO-Low					
CPHOS-Low					
PUR-Low					
TAM-Low					
DIF-High					
PBARB-Low					
CHCL3-Low					
STRZ-Low					

Training and Test Set 5

Training Set 5 Negative	Training Set 5 Positive- Necrosis	Training Set 5 Positive- Necrosis with Inflammation	Test Set 5 Negative	Test Set 5 Positive- Necrosis	Test Set 5 Positive- Necrosis with Inflammation
KETO-High	APAP-High	CCL4-High	ISON-Low	TET-High	LPS-High
5-FU-Hi	CCL4-Low	BRB-High	MET-Low		BRB-Low
CIS-Low		ANIT-High	CHCL3-High		
NAL-Low		DMN-High	PHEN-High		
GAN-High			TAM-Low		
CPHOS-High			GEN-Low		
CHCL3-Low			CLO-Low		
CHEX-Low			MET-High		
PUR-Low			QUIN-Low		
AMPB-Hi			STRZ-High		
PEG-Low			KETO-Low		
TET-Low			DEX-High		
CYCA-Low			CAD-Low		
DOX-Low			BUS-Low		
ETH-Low			EST-Low		
HYD-Low			BEN-Low		
STRZ-Low			CAD-High		
EST-High			CAR-High		
CHLOR-High			CIS-High		
5-FU-Low			CHLOR-Low		

LPS-Low			APAP-Low		
THEO-Low			DIF-High		
NAL-High			CLOZ-Low		
DOX-High			PBARB-High		
PBARB-Low			CPHOS-Low		
DIF-Low					
ERY-High					
QUIN-High					
ERY-Low					
CMC-Low					
ISON-High					
CLOZ-High					
BEN-High					
CHEX-High					
PHEN-Low					
ANIT-Low					
CLO-High					
THEO-High					
PUR-High					
BAP-Low					
CAR-Low					
DEX-Low					
GEN-High					
BAP-High					
HYD-High					
BUS-High					
GAN-Low					
AMPB-Low					
CYCA-High					
TAM-High					

Table 3 List of Genes, Whose Expression at 24h Directly Correlates with Liver
Inflammation at 72h, Ranked by Pearson Correlation Coefficient

Gene	Correlation Coefficient
Phase-1 RCT-207	0.598
Zinc finger protein	0.592
Gadd45	0.578
Gamma-actin, cytoplasmic	0.566
Heme oxygenase	0.558
Phase-1 RCT-50	0.549
Phase-1 RCT-144	0.547
Phase-1 RCT-179	0.546
Macrophage inflammatory protein-2 alpha	0.545
Superoxide dismutase Mn	0.533
Multidrug resistant protein-2	0.527
Phase-1 RCT-225	0.524
14-3-3 zeta	0.518
Cyclin G	0.507
Cofilin	0.502
Gadd153	0.501
Phase-1 RCT-242	0.492
c-jun	0.490
Cathepsin L, sequence 2	0.488
Phase-1 RCT-68	0.479
Phase-1 RCT-39	0.469
ID-1	0.464
Calpactin I heavy chain	0.463
PAR interacting protein	0.453
Endogenous retroviral sequence, 5' and 3' LTR	0.446
IkB-a	0.441
Phase-1 RCT-59	0.440
Phase-1 RCT-158	0.438
Phase-1 RCT-109	0.436
Multidrug resistant protein-1	0.431
Phase-1 RCT-205	0.430
Phase-1 RCT-49	0.429
Phase-1 RCT-145	0.425
Phase-1 RCT-213	0.425
Phase-1 RCT-72	0.419
60S ribosomal protein L6	0.415
Voltage-dependent anion channel 2 (Vdac2)	0.411
Phase-1 RCT-152	0.407
60S ribosomal protein L6 (alternate clone 1)	0.407
c-myc	0.406
Ribosomal protein L13A	0.406
IgE binding protein	0.406
Melanoma-associated antigen ME491	0.405

Beta-actin	0.403
c-H-ras	0.399
Phase-1 RCT-154	0.399
Phase-1 RCT-122	0.398
Integrin betal	0.397
Ornithine decarboxylase	0.395
Beta-tubulin, class I	0.395
Phase-1 RCT-241	0.395
Retinoid X receptor alpha	0.394
Bax (alpha)	0.394
Caspase 3	0.388
Insulin-like growth factor binding protein 1	0.385
Nucleoside diphosphate kinase beta isoform	0.385
Phase-1 RCT-60	0.384
Phase-1 RCT-196	0.382
Phase-1 RCT-192	0.380
Organic cation transporter 3	0.379
Thymosin beta-10	0.379
Osteoactivin	0.379
Phase-1 RCT-12	0.375
Phase-1 RCT-65	0.363
Waf1	0.360
Alpha-tubulin	0.360
Phase-1 RCT-215	0.359
Carbonyl reductase	0.359
p53	0.356
Phase-1 RCT-71	0.355
Phase-1 RCT-191	0.353
Beta-actin, sequence 2	0.352
Uncoupling protein 2	0.350

Table 4 List of Genes, Whose Expression at 24h Inversely Correlates with Liver Inflammation at 72h, Ranked by Spearman Correlation Coefficient

Gene	Correlation Coefficient
Matrin F/G	-0.425
Phase-1 RCT-36	-0.415
Phase-1 RCT-78	-0.403
Phase-1 RCT-33	-0.403
Phase-1 RCT-38	-0.402
Hepatic lipase	-0.399
Phase-1 RCT-214	-0.397
Carbonic anhydrase III	-0.394
Phase-1 RCT-288	-0.393
L-gulono-gamma-lactone oxidase	-0.393
Phase-1 RCT-92	-0.392
Phase-1 RCT-256	-0.391
Sodium/bile acid cotransporter	-0.382
Alpha 1 - Inhibitor III	-0.380
Phase-1 RCT-89	-0.380
Liver fatty acid binding protein	-0.379
Phase-1 RCT-296	-0.376
Organic anion transporter 3	-0.376
Phase-1 RCT-291	-0.375
Dynamin-1 (D100)	-0.375
Presenilin-1	-0.373
Aldehyde dehydrogenase, microsomal	-0.370
Phase-1 RCT-102	-0.365
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	-0.364
Phase-1 RCT-52	-0.363
Phase-1 RCT-168	-0.362
Sterol carrier protein 2	-0.362
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	-0.359
Phase-1 RCT-218	-0.359
Senescence marker protein-30	-0.357
Phase-1 RCT-40	-0.352
Paraoxonase 1	-0.352
Tryptophan hydroxylase	-0.351
Phase-1 RCT-123	-0.348
Phase-1 RCT-83	-0.347
Transthyretin	-0.347
Phase-1 RCT-219	-0.345
Phase-1 RCT-88	-0.341
Phase-1 RCT-289	-0.341
Apolipoprotein CIII	-0.341
Phase-1 RCT 165	-0.337
Phase-1 RCT-128	-0.336

Phase-1 RCT-264	-0.335
Phase-1 RCT-64	-0.335
Phase-1 RCT-233	-0.334
Phase-1 RCT-181	-0.333
Aquaporin-3 (AQP3)	-0.332
Phase-1 RCT-175	-0.331
Cytochrome P450 2C23	-0.330
Urinary protein 2 precursor	-0.327
3-hydroxyisobutyrate dehydrogenase	-0.327
Phase-1 RCT-117	-0.326
Glutathione peroxidase	-0.324
Phase-1 RCT-182	-0.324
Fatty acid synthase	-0.322
Phase-1 RCT-271	-0.321
Phase-1 RCT-10	-0.321
Phase-1 RCT-209	-0.320
Phase-1 RCT-67	-0.320
HMG-CoA synthase, mitochondrial	-0.316
Phase-1 RCT-137	-0.315
Stearyl-CoA desaturase, liver	-0.314
Apoptosis-regulating basic protein	-0.312
Phase-1 RCT-185	-0.312
Phase-1 RCT-98	-0.312
Phase-1 RCT-239	-0.312
Carbonic anhydrase III, sequence 2	-0.308
Phase-1 RCT-189	-0.308
Phase-1 RCT-270	-0.308
NADH-cytochrome b5 reductase	-0.308
Sulfotransferase K2	-0.301

Table 5 Predictive Genes for 24 Hour Expression Data

Gene Name	Combination Category*
Gamma-actin, cytoplasmic	5
60S ribosomal protein L6 (alternate clone 1)	3
60S ribosomal protein L6	3
Beta-tubulin, class I	3
c-jun	3
Gadd45	3
ID-1	3
IkB-a	3
Integrin beta1	3
Macrophage inflammatory protein-2 alpha	3
MAP kinase kinase	3
Multidrug resistant protein-2	3
Organic cation transporter 3	3
Phase-1 RCT-144	3
Phase-1 RCT-145	3
Phase-1 RCT-179	3
Phase-1 RCT-192	3
Phase-1 RCT-207	3
Phase-1 RCT-225	3
Phase-1 RCT-242	3
Phase-1 RCT-49	3
Phase-1 RCT-50	3
Phase-1 RCT-92	3
Zinc finger protein	3
14-3-3 zeta	2
Alpha-tubulin	2
Beta-actin	2
Cathepsin L, sequence 2	2
c-myc	2
Cytochrome P450 11A1	2
Gadd153	2
IgE binding protein	2
L-gulono-gamma-lactone oxidase	2
Matrin F/G	2
MHC class I antigen RT1.A1(f) alpha-chain	2
Nucleoside diphosphate kinase beta isoform	2
Ornithine decarboxylase	2
PAR interacting protein	2
Phase-1 RCT-181	2
Phase-1 RCT-185	2
Phase-1 RCT-205	2
Phase-1 RCT-213	2
Phase-1 RCT-233	2

Phase-1 RCT-258	2
Phase-1 RCT-288	2
Phase-1 RCT-33	2
Phase-1 RCT-36	2
Phase-1 RCT-39	2
Phase-1 RCT-60	2
Phase-1 RCT-64	2
Phase-1 RCT-65	2
Phase-1 RCT-78	2
Phase-1 RCT-98	1
Aldehyde dehydrogenase, microsomal	1
Alpha 1 - inhibitor III	1
Alpha-2-microglobulin	1
Apolipoprotein AII	1
Apolipoprotein CIII	1
Aquaporin-3 (AQP3)	1
Argininosuccinate lyase	1
Aspartate aminotransferase, mitochondrial	1
Urinary protein 2 precursor	1
ATP-stimulated glucocorticoid-receptor translocation promoter (Gyk)	1
Bax (alpha)	1
Beta-actin, sequence 2	1
Beta-alanine synthase	1
Carbonic anhydrase III	1
Carbonic anhydrase III, sequence 2	1
Carbonyl reductase	1
Carnitine palmitoyl-CoA transferase	1
Casein-alpha	1
Caspase 3	1
CDK102	1
c-H-ras	1
Cofilin	1
Cyclin D1	1
Cyclin G	1
Cytochrome P450 2C23	1
Dynamin-1 (D100)	1
Elongation factor-1 alpha	1
Endogenous retroviral sequence, 5' and 3' LTR	1
Endothelin-1	1
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	1
Fas antigen	1
Glutathione peroxidase	1
Heme oxygenase	1
Hepatic lipase	1
Hepatocyte growth factor receptor	1
HMG-CoA synthase, mitochondrial	1
Insulin-like growth factor binding protein 1	1

Interleukin-10	1
Liver fatty acid binding protein	1
Malic enzyme	1
Melanoma-associated antigen ME491	1
Multidrug resistant protein-1	1
MutL homologue (MLH1)	1
NADH-cytochrome b5 reductase	1
NADP-dependent Isocitrate dehydrogenase, cytosolic	1
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1
Octamer binding protein 1	1
Organic anion transporter 3	1
p53	1
Paraoxonase 1	1
Phase-1 RCT-10	1
Phase-1 RCT-102	1
Phase-1 RCT-109	1
Phase-1 RCT-111	1
Phase-1 RCT-113	1
Phase-1 RCT-115	1
Phase-1 RCT-117	1
Phase-1 RCT-12	1
Phase-1 RCT-123	1
Phase-1 RCT-128	1
Apoptosis-regulating basic protein	1
Phase-1 RCT-137	1
Phase-1 RCT-140	1
Phase-1 RCT-141	1
Phase-1 RCT-152	1
Phase-1 RCT-154	1
Phase-1 RCT-158	1
Phase-1 RCT-168	1
Phase-1 RCT-174	1
Phase-1 RCT-175	1
Phase-1 RCT-180	1
Phase-1 RCT-182	1
Phase-1 RCT-189	1
Phase-1 RCT-191	1
Phase-1 RCT-196	1
Vacuole membrane protein 1	1
Phase-1 RCT-209	1
Phase-1 RCT-211	1
Phase-1 RCT-212	1
Phase-1 RCT-214	1
Phase-1 RCT-215	1
Phase-1 RCT-218	1
Phase-1 RCT-219	1
Phase-1 RCT-239	1

Phase-1 RCT-24	1
Phase-1 RCT-241	1
Phase-1 RCT-256	1
Phase-1 RCT-264	1
Phase-1 RCT-27	1
Phase-1 RCT-270	1
Phase-1 RCT-271	1
Phase-1 RCT-281	1
Phase-1 RCT-282	1
Phase-1 RCT-287	1
Phase-1 RCT-289	1
Phase-1 RCT-291	1
Voltage-dependent anion channel 2 (Vdac2)	1
Phase-1 RCT-296	1
Phase-1 RCT-30	1
Phase-1 RCT-37	1
Phase-1 RCT-38	1
Phase-1 RCT-40	1
Phase-1 RCT-48	1
Phase-1 RCT-52	1
Phase-1 RCT-67	1
Phase-1 RCT-68	1
Phase-1 RCT-72	1
Phase-1 RCT-76	1
Phase-1 RCT-77	1
Phase-1 RCT-79	1
Phase-1 RCT-8	1
Phase-1 RCT-88	1
Phase-1 RCT-89	1
Preproalbumin, sequence 2	1
Presenilin-1	1
Pyruvate kinase, muscle	1
Retinol-binding protein (RBP)	1
Ribosomal protein L13A	1
Ribosomal protein S9	1
Senescence marker protein-30	1
Sodium/bile acid cotransporter	1
Sodium/glucose cotransporter 1	1
Sorbitol dehydrogenase	1
Stearyl-CoA desaturase, liver	1
Sterol carrier protein 2	1
Sulfotransferase K2	1
Superoxide dismutase Mn	1
Thymosin beta-10	1
Transthyretin	1
Tryptophan hydroxylase	1

Table 6 Randomly Selected Gene Subsets from 24 H Combo All (183 Genes)*

Rand 5 (1)	Rand 5 (2)
Aquaporin-3 (AQP3)	Apolipoprotein CIII
Phase-1 RCT-115	Cofilin
Phase-1 RCT-209	Voltage-dependent anion channel 2 (Vdac2)
Pyruvate kinase, muscle	Phase-1 RCT-271
Transthyretin	Phase-1 RCT-196

Rand 10 (1)	Rand 10 (2)
Aspartate aminotransferase, mitochondrial	PAR interacting protein
Casein-alpha	Phase-1 RCT-38
Fas antigen	Integrin beta1
Gadd45	Phase-1 RCT-141
Gamma-actin, cytoplasmic	Phase-1 RCT-50
Integrin beta1	Liver fatty acid binding protein
Macrophage inflammatory protein-2 alpha	Beta-actin, sequence 2
Phase-1 RCT-145	60S ribosomal protein L6
Phase-1 RCT-207	Phase-1 RCT-211
Phase-1 RCT-78	Ribosomal protein L13A

Rand 15 (1)	Rand 15 (2)
60S ribosomal protein L6 (alternate clone 1)	Phase-1 RCT-52
Argininosuccinate lyase	HMG-CoA synthase, mitochondrial
Cytochrome P450 11A1	Retinol-binding protein (RBP)
Dynamin-1 (D100)	Sodium/bile acid cotransporter
Endogenous retroviral sequence, 5' and 3' LTR	Beta-alanine synthase
Integrin beta1	Ornithine decarboxylase
Paraoxonase 1	Insulin-like growth factor binding protein 1
Apoptosis-regulating basic protein	Phase-1 RCT-109
Phase-1 RCT-181	Octamer binding protein 1
Phase-1 RCT-264	Phase-1 RCT-145
Voltage-dependent anion channel 2 (Vdac2)	NADP-dependent isocitrate dehydrogenase, cytosolic
Phase-1 RCT-33	Phase-1 RCT-39
Phase-1 RCT-36	Matrin F/G
Phase-1 RCT-52	Phase-1 RCT-289
Thymosin beta-10	Organic anion transporter 3

Table 7 Randomly Selected Gene Subsets from 24 H Combo 5 3 2 Gene Set
(52 Genes)*

Rand 5 (1)	Rand 5 (2)
Phase-1 RCT-207	Phase-1 RCT-233
60S ribosomal protein L6 (alternate clone 1)	Integrin beta1
Cathepsin L	Phase-1 RCT-50
Phase-1 RCT-145	Phase-1 RCT-145
Phase-1 RCT-65	Phase-1 RCT-225

Rand 10 (1)	Rand 10 (2)
MHC class I antigen RT1.A1(f) alpha-chain	Phase-1 RCT-65
Beta-actin	Gadd153
Beta-tubulin, class I	Phase-1 RCT-36
Cathepsin L	Phase-1 RCT-60
c-jun	Phase-1 RCT-181
Matrin F/G	60S ribosomal protein L6
Phase-1 RCT-225	Phase-1 RCT-144
Phase-1 RCT-288	Phase-1 RCT-192
Phase-1 RCT-36	Zinc finger protein
Phase-1 RCT-50	Phase-1 RCT-205

Rand 15 (1)	Rand 15 (2)
Phase-1 RCT-242	60S ribosomal protein L6 (alternate clone 1)
IkB-a	14-3-3 zeta
MAP kinase kinase	60S ribosomal protein L6
Matrin F/G	Alpha-tubulin
Multidrug resistant protein-2	Beta-actin
Nucleoside diphosphate kinase beta isoform	Beta-tubulin, class I
Organic cation transporter 3	Cathepsin L
PAR interacting protein	c-jun
Phase-1 RCT-179	c-myc
Phase-1 RCT-288	Cytochrome P450 11A1
Phase-1 RCT-33	Gadd153
Phase-1 RCT-36	Gadd45
Phase-1 RCT-39	Gamma-actin, cytoplasmic
Phase-1 RCT-64	ID-1

Phase-1 RCT-92	IgE binding protein
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Table 8 Randomly Selected Gene Subsets from Array Genes Excluding Combo All Set*

Rand 5 (1)	Rand 5 (2)
Heme binding protein 23	Phase-1 RCT-147
alpha-1,2-fucosyltransferase	NADPH cytochrome P450 reductase
Metallothionein 1	Phase-1 RCT-236
Phase-1 RCT-83	CXCR4
Pim1 proto-oncogene	TGF-beta receptor type II

Rand 10 (1)	Rand 10 (2)
Protein kinase C beta1	Phase-1 RCT-176
Phase-1 RCT-14	p55CDC
Retinoid X receptor alpha	Connexin-32
Phase-1 RCT-221	Aryl sulfotransferase
Cytochrome P450 2C11	Diacylglycerol kinase zeta
Phase-1 RCT-173	Phase-1 RCT-59
Inter-alpha-inhibitor H4 heavy chain (Itih4)	Phase-1 RCT-293
Major acute phase protein alpha-1 ADP-ribosylation factor-like protein ARL184	Thioredoxin-2 (Trx2)
	Diazepam binding inhibitor
Cellular retinoic acid binding protein 2	Phase-1 RCT-47

Rand 15 (1)	Rand 15 (2)
Phase-1 RCT-42	Neurofibromin (NF1 tumor suppressor)
Tissue factor pathway inhibitor	Interleukin-1 beta
C-reactive protein	Glutathione S-transferase alpha subunit
Caspase 2	Protein O-mannosyltransferase 1 (Pomt1)
Cyclin D3	Phase-1 RCT-32
Dopamine transporter	Monoamine oxidase A
DNA topoisomerase I	25-hydroxyvitamin D3-1 alpha-hydroxylase
Multidrug resistant protein-3	Acyl-CoA dehydrogenase, medium chain
Defender against cell death-1	Macrophage inflammatory protein-1 alpha

CXCR4	Phase-1 RCT-133
Cytochrome c oxidase subunit II	Na/K ATPase alpha-1
Low density lipoprotein receptor	Vesicular monoamine transporter (VMAT)
Farnesol receptor	Phase-1 RCT-176
H-rev107	Alpha-fetoprotein
8-oxoguanine DNA glycosylase	Phase-1 RCT-177

Table 9 Liver Inflammation Individual Sample Prediction Values for 24 Hour Data
Predictive Genes (Combined List and Subsets)

Gene Set (#)	Prediction Measure*				
	Overall Accuracy**	FP _I **	FN _I **	GMM _I **	GMM _N **
Combo All (183)	0.860 (0.785 - 0.933)	0.092 (0.014 - 0.123)	0.167 (0.000 - 0.500)	0.862 (0.671 - 0.993)	0.891 (0.791 - 0.939)
Combo 5 (1)	0.845 (0.779 - 0.904)	0.120 (0.075 - 0.169)	0.100 (0.000 - 0.167)	0.890 (0.832 - 0.962)	0.845 (0.777 - 0.905)
Combo 3 (23)	0.849 (0.831 - 0.880)	0.098 (0.029 - 0.152)	0.167 (0.000 - 0.333)	0.861 (0.765 - 0.954)	0.823 (0.555 - 0.919)
Combo 2 (28)	0.793 (0.747 - 0.827)	0.171 (0.116 - 0.212)	0.300 (0.000 - 0.500)	0.753 (0.636 - 0.888)	0.857 (0.759 - 0.893)
Combo 1 (131)	0.804 (0.709 - 0.907)	0.156 (0.043 - 0.205)	0.200 (0.000 - 0.500)	0.817 (0.645 - 0.978)	0.860 (0.729 - 0.945)

Table 10 Liver Inflammation Compound-Dose Prediction Values for 24 Hour Data
Predictive Genes (Combined List and Subsets)

Gene Set	Number of Genes	Overall Accuracy**
Combo All	183	0.869 (0.741 - 0.962)
Combo 5	1	0.892 (0.846 - 0.958)
Combo 3	23	0.860 (0.833 - 0.885)
Combo 2	28	0.814 (0.769 - 0.846)
Combo 1	131	0.839 (0.704 - 0.885)

Table 11 Liver Inflammation Compound Prediction Values for 24 Hour Data
Predictive Genes (Combined List and Subsets)

Gene Set	Number of Genes	Overall Accuracy**
Combo All	183	0.864 (0.739 – 0.955)
Combo 5	1	0.886 (0.826 – 0.952)
Combo 3	23	0.855 (0.810 – 0.885)
Combo 2	28	0.796 (0.739 – 0.846)
Combo 1	131	0.839 (0.696 – 0.909)

Table 12 Individual Gene Predictions: Combo 3

Gene Name	Overall Correct Calls			
	Mean	s.d.	min	max
60S ribosomal protein L6 (alternate clone 1)	0.602	0.084	0.493	0.708
60S ribosomal protein L6	0.715	0.024	0.693	0.753
Beta-tubulin, class I	0.417	0.042	0.356	0.468
c-jun	0.641	0.044	0.573	0.685
Gadd45	0.727	0.063	0.667	0.805
ID-1	0.564	0.053	0.519	0.640
IkB-a	0.629	0.070	0.557	0.720
Integrin beta1	0.740	0.061	0.688	0.840
MAP kinase kinase	0.570	0.070	0.506	0.667
Macrophage inflammatory protein-2 alpha	0.561	0.058	0.479	0.640
Multidrug resistant protein-2	0.609	0.082	0.542	0.709
Organic cation transporter 3	0.711	0.070	0.611	0.805
Phase-1 RCT-144	0.762	0.052	0.722	0.844
Phase-1 RCT-145	0.634	0.128	0.452	0.779
Phase-1 RCT-179	0.710	0.038	0.658	0.764
Phase-1 RCT-192	0.675	0.051	0.625	0.760
Phase-1 RCT-207	0.734	0.022	0.696	0.753
Phase-1 RCT-225	0.579	0.023	0.556	0.608
Phase-1 RCT-242	0.621	0.106	0.468	0.747
Phase-1 RCT-49	0.665	0.057	0.587	0.727
Phase-1 RCT-50	0.609	0.032	0.575	0.653
Phase-1 RCT-92	0.604	0.335	0.231	0.883
Zinc finger protein	0.775	0.041	0.720	0.819
Average Individual Combo 3	0.646	0.070	0.564	0.729
Minimum Individual Combo 3	0.417	0.022	0.231	0.468
Maximum Individual Combo 3	0.775	0.335	0.722	0.883

Table 13 Individual Gene Predictions: Combo 2

Gene Name	Overall Correct Calls			
	Mean	s.d.	min	max
14-3-3 zeta	0.702	0.079	0.610	0.827
Alpha-tubulin	0.450	0.123	0.239	0.533
Beta-actin	0.639	0.046	0.571	0.681
Cathepsin L, sequence 2	0.509	0.221	0.127	0.644
c-myc	0.672	0.062	0.570	0.722
Cytochrome P450 11A1	0.677	0.180	0.364	0.810
Gadd153	0.502	0.096	0.354	0.589
IgE binding protein	0.721	0.012	0.709	0.740
L-gulono-gamma -lactone oxidase	0.680	0.277	0.329	0.886
Matrin F/G	0.695	0.132	0.493	0.797
MHC class I antigen RT1.A1(f) alpha-chain	0.475	0.139	0.360	0.707
Nucleoside diphosphate kinase beta isoform	0.573	0.062	0.506	0.653
Ornithine decarboxylase	0.666	0.068	0.608	0.764
PAR interacting protein	0.720	0.077	0.589	0.778
Phase-1 RCT-181	0.731	0.211	0.452	0.886
Phase-1 RCT-185	0.615	0.324	0.055	0.883
Phase-1 RCT-205	0.585	0.087	0.514	0.733
Phase-1 RCT-213	0.595	0.066	0.533	0.701
Phase-1 RCT-233	0.657	0.267	0.200	0.883
Phase-1 RCT-258	0.720	0.070	0.627	0.797
Phase-1 RCT-288	0.859	0.017	0.836	0.883
Phase-1 RCT-33	0.679	0.280	0.347	0.886
Phase-1 RCT-36	0.646	0.323	0.250	0.886
Phase-1 RCT-39	0.650	0.079	0.584	0.773
Phase-1 RCT-60	0.569	0.080	0.452	0.653
Phase-1 RCT-64	0.814	0.050	0.767	0.875
Phase-1 RCT-65	0.557	0.055	0.486	0.623
Phase-1 RCT-78	0.805	0.167	0.506	0.886
Average Individual Combo 3	0.649	0.130	0.466	0.767
Minimum Individual Combo 3	0.450	0.012	0.055	0.533
Maximum Individual Combo 3	0.859	0.324	0.836	0.886

Table 14 Comparison of Predictivity for True Liver Inflammation Classification and Random Classification Using Combo Gene Sets and Random Subsets and 24h data

Gene List*	Gene Subset*	Overall Accuracy**							
		Correct Classification				Random Classification			
		Mean	Min	-	Max	Mean	Min.	-	Max.
Combo All	All Genes	0.860	(0.785	-	0.933)	0.149	(0.055	-	0.278)
	5 genes (1)	0.648	(0.315	-	0.886)	0.479	(0.178	-	0.785)
	5 genes (2)	0.808	(0.764	-	0.836)	0.177	(0.093	-	0.278)
	10 genes (1)	0.839	(0.759	-	0.893)	0.173	(0.152	-	0.205)
	10 genes (2)	0.843	(0.785	-	0.909)	0.199	(0.107	-	0.266)
	15 genes (1)	0.735	(0.658	-	0.795)	0.232	(0.151	-	0.292)
	15 genes (2)	0.799	(0.696	-	0.867)	0.181	(0.137	-	0.293)
Combo 5 3 2	All Genes	0.852	(0.797	-	0.907)	0.223	(0.139	-	0.354)
	5 genes (1)	0.766	(0.722	-	0.800)	0.239	(0.167	-	0.299)
	5 genes (2)	0.789	(0.764	-	0.818)	0.177	(0.133	-	0.278)
	10 genes (1)	0.778	(0.722	-	0.818)	0.185	(0.111	-	0.234)
	10 genes (2)	0.813	(0.764	-	0.844)	0.256	(0.139	-	0.351)
	15 genes (1)	0.763	(0.722	-	0.840)	0.205	(0.111	-	0.299)
	15 genes (2)	0.867	(0.823	-	0.903)	0.193	(0.123	-	0.253)
All-Pred	5 genes (1)	0.559	(0.467	-	0.625)	0.244	(0.187	-	0.342)
	5 genes (2)	0.612	(0.519	-	0.747)	0.205	(0.139	-	0.280)
	10 genes (1)	0.691	(0.639	-	0.787)	0.219	(0.152	-	0.307)
	10 genes (2)	0.528	(0.431	-	0.693)	0.197	(0.093	-	0.293)
	15 genes (1)	0.509	(0.456	-	0.587)	0.194	(0.080	-	0.301)
	15 genes (2)	0.623	(0.544	-	0.733)	0.220	(0.167	-	0.247)

Table 15 Distribution of Compounds* in Individual Training and Test Sets
for 6 Hour Liver Inflammation Data

Training and Test Set 1

Training Set 1 Negative**	Training Set 1 Positive**- Necrosis	Training Set 1 Positive**- Necrosis with Inflammation	Test Set 1 Negative**	Test Set 1 Positive**- Necrosis	Test Set 1 Positive**- Necrosis with Inflammation
CHLOR-Low ⁺	TET-High ⁺	DMN-High ⁺	HYD-High ⁺	APAP-High ⁺	BRB-Low ⁺
TAM-High	CCL4-Low	ANIT-High	CYCA-Low		CAD-4
BEN-Low		CCL4-High	GEN-Low		BRB-High
CHEX-High		LPS-High	ERY-Low		
5-FU-Low		AFLB	CMC-Low		
NAL-High			PHEN-High		
TAM-Low			DOX-Low		
ERY-High			ANIT-Low		
PEG-Low			QUIN-Low		
HYD-Low			5-FU-Hi		
CPHOS-Low			DOX-High		
CAD-Low			BAP-High		
CLO-Low			CIS-Low		
STRZ-Low			KETO-High		
GEN-High			CIS-High		
GAN-Low			CAR-Low		
CPHOS-High			BEN-High		
QUIN-High			CLOZ-Low		
NAL-Low			CLOZ-High		
EST-Low			PBARB-High		
STRZ-High			DIF-Low		
THEO-High			PHEN-Low		
EST-High			KETO-Low		
ETH-Low			AMPB-Low		
PBARB-Low			GAN-High		
CAR-High					
TET-Low					
CHCL3-Low					
AMPB-Hi					
CHCL3-High					
ISON-Low					
THEO-Low					
MET-High					

PUR-High					
CLO-High					
DEX-High					
APAP-Low					
BUS-Low					
PUR-Low					
DIF-High					
CAD-High					
BAP-Low					
LPS-Low					
ISON-High					
CHLOR-High					
MET-Low					
CHEX-Low					
DEX-Low					
BUS-High					
CYCA-High					

Training and Test Set 2

Training Set 2 Negative	Training Set 2 2 Positive- Necrosis	Training Set 2 Positive- Necrosis with Inflammation	Test Set 2 Negative	Test Set 2 Positive- Necrosis	Test Set 2 Positive- Necrosis with Inflammation
QUIN-High	CCL4-Low	LPS-High	QUIN-Low	TET-High	DMN-High
DOX-Low	APAP-High	AFLB	CMC-Low		BRB-Low
CHEX-Low		BRB-High	CLO-High		CAD-4
THEO-Low		ANIT-High	STRZ-Low		
BUS-Low		CCL4-High	BUS-High		
STRZ-High			ISON-High		
CPHOS-Low			CYCA-High		
GAN-High			THEO-High		
BEN-Low			CLO-Low		
EST-High			AMPB-Hi		
ANIT-Low			CYCA-Low		
HYD-High			CHCL3-High		
DIF-Low			CLOZ-Low		
ISON-Low			GEN-Low		
GAN-Low			AMPB-Low		
KETO-High			TET-Low		
PBARB-Low			CAD-Low		

PHEN-High			NAL-Low		
BEN-High			CHLOR-Low		
CIS-Low			ERY-High		
CHLOR-High			GEN-High		
ETH-Low			PUR-High		
CLOZ-High			DIF-High		
PUR-Low			HYD-Low		
CHCL3-Low			DOX-High		
PHEN-Low					
ERY-Low					
5-FU-Hi					
CAR-High					
MET-High					
CIS-High					
5-FU-Low					
CHEX-High					
TAM-High					
EST-Low					
APAP-Low					
NAL-High					
LPS-Low					
CPHOS-High					
CAD-High					
MET-Low					
BAP-High					
TAM-Low					
KETO-Low					
BAP-Low					
DEX-Low					
PBARB-High					
DEX-High					
CAR-Low					
PEG-Low					

Training and Test Set 3

Training Set 3 Negative	Training Set 3 Positive- Necrosis	Training Set 3 Positive- Necrosis with Inflammation	Test Set 3 Negative	Test Set 3 Positive- Necrosis	Test Set 3 Positive- Necrosis with Inflammation
CPHOS-Low	TET-High	ANIT-High	ISON-Low	CCL4-Low	CAD-4
CHEX-High	APAP-High	BRB-Low	QUIN-High		BRB-High

THEO-Low		AFLB	NAL-High		LPS-High
AMPB-Low		DMN-High	CHEX-Low		
5-FU-Low		CCL4-High	ETH-Low		
CHLOR-High			TAM-High		
APAP-Low			GAN-Low		
THEO-High			BUS-High		
STRZ-High			STRZ-Low		
CPHOS-High			NAL-Low		
DEX-High			PHEN-Low		
ISON-High			BAP-High		
HYD-High			CLO-High		
BEN-High			PHEN-High		
CAR-Low			ERY-Low		
5-FU-Hi			PEG-Low		
CLO-Low			LPS-Low		
EST-Low			CLOZ-High		
CAR-High			GAN-High		
CIS-High			GEN-Low		
CHCL3-High			DIF-Low		
PUR-High			PBARB-Low		
BEN-Low			KETO-Low		
CLOZ-Low			PBARB-High		
BAP-Low			PUR-Low		
CHCL3-Low					
TAM-Low					
DIF-High					
DEX-Low					
ANIT-Low					
CYCA-High					
DOX-High					
TET-Low					
GEN-High					
BUS-Low					
CMC-Low					
AMPB-Hi					
MET-High					
HYD-Low					
CIS-Low					
QUIN-Low					
CYCA-Low					
CAD-Low					
MET-Low					
DOX-Low					
KETO-High					
CHLOR-Low					
CAD-High					
ERY-High					

EST-High					
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Training and Test Set 4

Training Set 4 Negative	Training Set 4 Positive- Necrosis	Training Set 4 Positive- Necrosis with Inflammation	Test Set 4 Negative	Test Set 4 Positive- Necrosis	Test Set 4 Positive- Necrosis with Inflammation
ERY-Low	TET-High	CAD-4	TET-Low	APAP-High	DMN-High
BAP-Low	CCL4-Low	AFLB	GEN-High		BRB-High
MET-High		BRB-Low	KETO-Low		ANIT-High
ISON-High		LPS-High	DEX-High		
DIF-Low		CCL4-High	CAR-High		
5-FU-Hi			CLO-Low		
HYD-High			CAD-Low		
PUR-High			CHLOR-High		
THEO-Low			DOX-Low		
DEX-Low			5-FU-Low		
QUIN-Low			CHCL3-High		
CHCL3-Low			AMPB-Hi		
THEO-High			DIF-High		
PEG-Low			CPHOS-Low		
EST-Low			STRZ-Low		
CHEX-High			QUIN-High		
AMPB-Low			CHEX-Low		
CYCA-High			CLO-High		
LPS-Low			BUS-Low		
CLOZ-Low			GAN-High		
TAM-Low			ISON-Low		
GEN-Low			TAM-High		
BAP-High			BUS-High		
CIS-Low			DOX-High		
BEN-Low			CMC-Low		
KETO-High					
CPHOS-High					
STRZ-High					
CIS-High					
HYD-Low					
NAL-Low					
MET-Low					
PHEN-High					
ETH-Low					

CHLOR-Low					
CLOZ-High					
PBARB-Low					
BEN-High					
APAP-Low					
ERY-High					
EST-High					
PUR-Low					
CYCA-Low					
CAR-Low					
ANIT-Low					
GAN-Low					
PBARB-High					
NAL-High					
PHEN-Low					
CAD-High					

Training and Test Set 5

Training Set 5 Negative	Training Set 5 Positive- Necrosis	Training Set 5 Positive- Necrosis with Inflammation	Test Set 5 Negative	Test Set 5 Positive- Necrosis	Test Set 5 Positive- Necrosis with Inflammation
CAR-Low	APAP-High	BRB-High	BUS-High	TET-High	CCL4-High
TET-Low	CCL4-Low	LPS-High	ISON-High		BRB-Low
QUIN-Low		DMN-High	CMC-Low		AFLB
CPHOS-Low		ANIT-High	AMPB-Low		
MET-High		CAD-4	HYD-Low		
5-FU-Hi			GEN-High		
GAN-Low			BAP-High		
DOX-High			PBARB-High		
BAP-Low			CIS-High		
BEN-Low			PHEN-High		
CHEX-High			ERY-High		
NAL-High			KETO-High		
PBARB-Low			THEO-High		
STRZ-High			BUS-Low		
PEG-Low			CHCL3-Low		
ERY-Low			EST-High		
DIF-Low			APAP-Low		

AMPB-HI			CHLOR-High		
PUR-High			CAD-High		
GEN-Low			5-FU-Low		
ETH-Low			CYCA-High		
GAN-High			ISON-Low		
CYCA-Low			PHEN-Low		
CLOZ-High			MET-Low		
HYD-High			PUR-Low		
NAL-Low					
CHLOR-Low					
CLO-Low					
CAR-High					
TAM-Low					
STRZ-Low					
CPHOS-High					
CLO-High					
CHEX-Low					
THEO-Low					
ANIT-Low					
DOX-Low					
CIS-Low					
DEX-High					
TAM-High					
EST-Low					
DIF-High					
DEX-Low					
CLOZ-Low					
CHCL3-High					
KETO-Low					
CAD-Low					
QUIN-High					
LPS-Low					
BEN-High					

Table 16 List of Genes, Whose Expression at 6h Directly Correlates
with Liver Inflammation at 72h, Ranked by Pearson Correlation Coefficient

Gene	Correlation Coefficient
Phase-1 RCT-207	0.383
Phase-1 RCT-59	0.356
c-jun	0.346
Phase-1 RCT-50	0.327
Cyclin G	0.321
Phase-1 RCT-144	0.320
Gadd153	0.317
ID-1	0.313
Heme oxygenase	0.310
Zinc finger protein	0.300
NIPK	0.299
Phase-1 RCT-179	0.295
Phase-1 RCT-197	0.293
Gadd45	0.293
Activating transcription factor 3	0.275
c-myc	0.274
Melanoma-associated antigen ME491	0.270
Beta-tubulin, class I	0.265
Phase-1 RCT-49	0.260
Waf1	0.259
14-3-3 zeta	0.253
Phase-1 RCT-225	0.252
Cathepsin L, sequence 2	0.248
Phase-1 RCT-212	0.247
Phase-1 RCT-242	0.243
Ferritin H-chain	0.235
Phase-1 RCT-62	0.232
Phase-1 RCT-75	0.232
Argininosuccinate lyase	0.230
Phase-1 RCT-156	0.230
Caspase 6	0.229
Insulin-like growth factor binding protein 1	0.227
Phase-1 RCT-228	0.227
Phase-1 RCT-109	0.225
Integrin beta1	0.224
Colony-stimulating factor-1	0.223
Phase-1 RCT-111	0.221
Phase-1 RCT-191	0.220
Phase-1 RCT-72	0.220
Phase-1 RCT-103	0.220

Phase-1 RCT-12	0.218
Matrix metalloproteinase-1	0.217
Phase-1 RCT-127	0.216
NGF-inducible anti-proliferative putative secreted protein (PC3)	0.216
Phase-1 RCT-171	0.215
Macrophage inflammatory protein-1 alpha	0.212
Phase-1 RCT-259	0.211
MHC class I antigen RT1.A1(f) alpha-chain	0.210
Phase-1 RCT-95	0.208
Phase-1 RCT-235	0.204
Phase-1 RCT-55	0.203
Phase-1 RCT-221	0.202
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.202
Macrophage inflammatory protein-2 alpha	0.201

Table 17 List of Genes, Whose Expression at 6 h Inversely Correlates
with Liver Inflammation at 72h, Ranked by Spearman Correlation Coefficient

Gene	Correlation Coefficient
Diacylglycerol kinase zeta	-0.150
Carbamyl phosphate synthetase I	-0.151
Phase-1 RCT-28	-0.152
Cyclin D3	-0.154
3-methyladenine DNA glycosylase	-0.154
Phase-1 RCT-63	-0.155
8-oxoguanine DNA glycosylase	-0.156
Cholesterol 7-alpha-hydroxylase (P450 VII)	-0.160
Phase-1 RCT-141	-0.160
Peroxisome assembly factor 1	-0.161
Phase-1 RCT-184	-0.161
Phase-1 RCT-260	-0.162
Glutamine synthetase	-0.162
Vesicular monoamine transporter (VMAT)	-0.162
Phase-1 RCT-112	-0.167
Inositol polyphosphate multikinase (Ipmk)	-0.168
Phase-1 RCT-280	-0.171
Matrin F/G	-0.172
Selenoprotein P	-0.172
Complement component C3	-0.172
Phase-1 RCT-32	-0.172
Phase-1 RCT-13	-0.174
Phase-1 RCT-114	-0.175
Organic anion transporter K1	-0.176
Phase-1 RCT-82	-0.176
Phase-1 RCT-168	-0.177
Carbonic anhydrase II	-0.179
Cytochrome P450 2E1	-0.181
Stem cell factor	-0.183
Phase-1 RCT-83	-0.184
C4b-binding protein	-0.184
Phase-1 RCT-140	-0.185
JNK1 stress activated protein kinase	-0.187
Peroxisomal multifunctional enzyme type II	-0.189
Cyclin dependent kinase 4	-0.189
Organic anion transporter 3	-0.190
Alcohol dehydrogenase 1	-0.190
Phase-1 RCT-139	-0.196
Emerin	-0.199
Phase-1 RCT-173	-0.205
Nucleosome assembly protein	-0.207

Phase-1 RCT-73	-0.209
Phase-1 RCT-214	-0.214
Phase-1 RCT-119	-0.215
Tryptophan hydroxylase	-0.216
PTEN/MMAC1	-0.217
Thymidylate synthase	-0.220
DNA topoisomerase I	-0.223
Phase-1 RCT-40	-0.228
Sarcoplasmic reticulum calcium ATPase	-0.228
Protein tyrosine phosphatase alpha	-0.238
Carbonic anhydrase III	-0.243
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	-0.256
Phase-1 RCT-161	-0.261
Glucokinase	-0.265
Senescence marker protein-30	-0.275
Acetyl-CoA carboxylase	-0.294

Table 18 List of genes whose expression at 6 hours is predictive of liver inflammation at 72 hours

Gene	Combination* (No. of Occurrences)
Gadd153	5
Argininosuccinate lyase	4
Beta-tubulin, class I	4
Cathepsin L, sequence 2	4
c-myc	4
Heme oxygenase	4
Insulin-like growth factor binding protein 1	4
Integrin beta1	4
Interferon related developmental regulator IFRD1 (PC4)	4
Monoamine oxidase B	4
NIPK	4
Phase-1 RCT-127	4
Phase-1 RCT-197	4
Phase-1 RCT-207	4
Phase-1 RCT-242	4
Phase-1 RCT-50	4
Phase-1 RCT-72	4
Phase-1 RCT-75	4
Senescence marker protein-30	4
8-oxoguanine DNA glycosylase	3
Axin	3
C4b-binding protein	3
Carbamyl phosphate synthetase I	3
Caspase 6	3
c-jun	3
Cyclin G	3
Gadd45	3
ID-1	3
JNK1 stress activated protein kinase	3
Macrophage inflammatory protein-1 alpha	3
NGF-inducible anti-proliferative putative secreted protein (PC3)	3
Peroxisome proliferator activated receptor gamma	3
Phase-1 RCT-161	3
Phase-1 RCT-168	3
Phase-1 RCT-184	3
Phase-1 RCT-214	3
Phase-1 RCT-225	3
Phase-1 RCT-287	3
Phase-1 RCT-40	3
Phase-1 RCT-49	3

Phase-1 RCT-89	3
Selenoprotein P	3
Stem cell factor	3
Zinc finger protein	3
Phase-1 RCT-171	2
14-3-3 zeta	2
3-methyladenine DNA glycosylase	2
Acetyl-CoA carboxylase	2
Alcohol dehydrogenase 1	2
Alpha-fetoprotein	2
AT-3	2
Carbonic anhydrase III	2
Cholesterol 7-alpha-hydroxylase (P450 VII)	2
Ciliary neurotrophic factor	2
Cofilin	2
Colony-stimulating factor-1	2
Cytochrome P450 2E1	2
DNA binding protein inhibitor ID2	2
DNA polymerase beta	2
DNA topoisomerase I	2
Elongation factor-1 alpha	2
Emerin	2
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	2
Ferritin H-chain	2
Fetuin beta (Fetub)	2
Gamma-actin, cytoplasmic	2
Glucokinase	2
Glucose-regulated protein 78	2
Glutathione S-transferase theta-1	2
HMG CoA reductase	2
Insulin-like growth factor I	2
Iron-responsive element-binding protein	2
Matrin F/G	2
Melanoma-associated antigen ME491	2
Multidrug resistant protein-2	2
NADP-dependent isocitrate dehydrogenase, cytosolic	2
Nucleosome assembly protein	2
Peroxisomal multifunctional enzyme type II	2
Peroxisome assembly factor 1	2
Phase-1 RCT-252	2
Phase-1 RCT-109	2
Protein O-mannosyltransferase 1 (Pomt1)	2
Phase-1 RCT-123	2
Phase-1 RCT-141	2
Phase-1 RCT-144	2
Phase-1 RCT-166	2

Phase-1 RCT-169	2
Phase-1 RCT-173	2
Phase-1 RCT-179	2
Phase-1 RCT-18	2
Phase-1 RCT-191	2
Phase-1 RCT-221	2
Phase-1 RCT-251	2
Phase-1 RCT-270	2
Phase-1 RCT-28	2
Phase-1 RCT-289	2
Phase-1 RCT-297	2
Phase-1 RCT-32	2
Phase-1 RCT-55	2
Phase-1 RCT-59	2
Phase-1 RCT-62	2
Phase-1 RCT-63	2
Phase-1 RCT-65	2
Phase-1 RCT-66	2
Phase-1 RCT-71	2
Phase-1 RCT-73	2
Phase-1 RCT-82	2
Phase-1 RCT-9	2
Phase-1 RCT-95	2
Proliferating cell nuclear antigen gene	2
Pyruvate kinase, muscle	2
Ribosomal protein L13A	2
Thioredoxin-1 (Trx1)	2
Thymidylate synthase	2
Cyclin-dependent kinase 4 inhibitor P27kip1 (alternate clone)	1
Cytochrome P450 2C39 (alternate clone 2)	1
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	1
3-hydroxyisobutyrate dehydrogenase	1
Activating transcription factor 3	1
Activin receptor type II	1
Acyl-CoA dehydrogenase, medium chain	1
Adenine nucleotide translocator 1	1
Alpha-1 acid glycoprotein	1
Alpha-1 microglobulin/bikunin precursor (Ambp)	1
Alpha-2-macroglobulin, sequence 2	1
Alpha-2-microglobulin	1
Apolipoprotein E	1
Aryl sulfotransferase	1
Urinary protein 2 precursor	1
Carbonic anhydrase II	1
Carbonic anhydrase III, sequence 2	1
Carbonyl reductase	1
Ceruloplasmin	1

Complement component C3	1
Complement factor I (CFI)	1
Cyclin D3	1
Cystatin C	1
Cytochrome P450 1A2	1
Cytochrome P450 2C11	1
Diacylglycerol kinase zeta	1
Disulfide isomerase related protein (ERp72)	1
Dynamin-1 (D100)	1
Endogenous retroviral sequence, 5' and 3' LTR	1
Epoxide hydrolase	1
Focal adhesion kinase (pp125FAK)	1
Gap junction membrane channel protein beta 1 (Gjb1)	1
Glucose transporter 2	1
Glutamine synthetase	1
Glutathione S-transferase Yb2 subunit	1
Glutathione S-transferase P1	1
Glutathione S-transferase Ya	1
Glycine methyltransferase	1
Hepatic lipase	1
Hypoxia-inducible factor 1 alpha	1
IkB-a	1
Insulin-like growth factor binding protein 5	1
Integrin beta-4	1
Inter-alpha-inhibitor H4 heavy chain (Itih4)	1
Liver fatty acid binding protein	1
Lysyl oxidase	1
Macrophage inflammatory protein-2 alpha	1
Malate dehydrogenase, cytosolic	1
Matrix metalloproteinase-1	1
Methylacyl-CoA racemase alpha	1
MHC class I antigen RT1.A1(f) alpha-chain	1
MHC class II antigen RT1.B-1 beta-chain	1
Multidrug resistant protein-1	1
NADPH cytochrome P450 oxidoreductase	1
N-cadherin	1
Organic anion transporter 3	1
Organic anion transporting polypeptide 1	1
Organic cation transporter 3	1
Osteopontin	1
Phase-1 RCT-10	1
Phase-1 RCT-103	1
Phase-1 RCT-108	1
Phase-1 RCT-111	1
Phase-1 RCT-112	1
Phase-1 RCT-113	1
Phase-1 RCT-114	1

Phase-1 RCT-117	1
Phase-1 RCT-119	1
Phase-1 RCT-12	1
Phase-1 RCT-13	1
Phase-1 RCT-136	1
Phase-1 RCT-137	1
Phase-1 RCT-138	1
Phase-1 RCT-140	1
Phase-1 RCT-142	1
Phase-1 RCT-143	1
Phase-1 RCT-145	1
Phase-1 RCT-148	1
Phase-1 RCT-15	1
Phase-1 RCT-151	1
Phase-1 RCT-156	1
Phase-1 RCT-158	1
Phase-1 RCT-164	1
Phase-1 RCT-180	1
Phase-1 RCT-189	1
Phase-1 RCT-192	1
Phase-1 RCT-195	1
Phase-1 RCT-202	1
Phase-1 RCT-204	1
Calgranulin B	1
Phase-1 RCT-212	1
Phase-1 RCT-22	1
Phase-1 RCT-235	1
Phase-1 RCT-240	1
Phase-1 RCT-241	1
Phase-1 RCT-25	1
Phase-1 RCT-258	1
Phase-1 RCT-259	1
Phase-1 RCT-260	1
Phase-1 RCT-261	1
Phase-1 RCT-264	1
Phase-1 RCT-278	1
Phase-1 RCT-280	1
Phase-1 RCT-281	1
Phase-1 RCT-288	1
Phase-1 RCT-29	1
Phase-1 RCT-290	1
Phase-1 RCT-294	1
Phase-1 RCT-3	1
Phase-1 RCT-34	1
Phase-1 RCT-39	1
Phase-1 RCT-42	1
Phase-1 RCT-43	1

Phase-1 RCT-45	1
Phase-1 RCT-53	1
Phase-1 RCT-54	1
Phase-1 RCT-56	1
Phase-1 RCT-76	1
Phase-1 RCT-83	1
Phase-1 RCT-90	1
Phase-1 RCT-91	1
Phase-1 RCT-96	1
Phosphatidylethanolamine-binding protein	1
Phospholipase D	1
Prostaglandin H synthase	1
Protein tyrosine phosphatase alpha	1
PTEN/MMAC1	1
Retinol-binding protein (RBP)	1
Ribosomal protein L13	1
Ribosomal protein S9	1
Sarcoplasmic reticulum calcium ATPase	1
Stathmin	1
Superoxide dismutase Mn	1
Syndecan-1	1
Tissue factor pathway inhibitor	1
Tissue plasminogen activator	1
Tryptophan hydroxylase	1
Ubiquitin conjugating enzyme (RAD 6 homologue)	1
UDP-glucuronosyltransferase	1
Vascular endothelial growth factor	1
Very long-chain acyl-CoA synthetase	1
Vesicular monoamine transporter (VMAT)	1
VL30 element	1
Waf1	1

Table 19 Comparison of Predictivity for True Liver Inflammation Classification and Random Classification Using Combo Gene Sets and 6h data

Gene List*	Overall Accuracy**							
	Correct Classification				Random Classification			
	Mean	Min	-	Max	Mean	Min.	-	Max.
Combo All	0.736	(0.638	-	0.815)	0.405	(0.321	-	0.463)
Combo 5	0.660	(0.364	-	0.788)	0.448	(0.210	-	0.597)
Combo 4	0.767	(0.650	-	0.840)	0.302	(0.150	-	0.378)
Combo 3	0.745	(0.700	-	0.802)	0.357	(0.309	-	0.425)
Combo 2	0.698	(0.538	-	0.770)	0.361	(0.325	-	0.420)
Combo 1	0.515	(0.338	-	0.679)	0.378	(0.257	-	0.455)

Table 20 Distribution of Compounds* in Individual Training
and Test Sets for 72 Hour Liver Inflammation Data

Training and Test Set 1

Training Set 1 Negative**	Training Set 1 Positive**- Necrosis	Training Set 1 Positive**- Necrosis with Inflammation	Test Set 1 Negative**	Test Set 1 Positive**- Necrosis	Test Set 1 Positive**- Necrosis with Inflammation
5-FU-High ⁺	CCL4-Low ⁺	CCL4-High ⁺	5-FU-Low ⁺	APAP-High ⁺	ANIT-High ⁺
AMPB-Low	TET-High	BRB-High	THEO-Low		DMN
APAP-Low		AFLB	AMPB-High		
AZA-High		BRB-Low	ANIT-Low		
AZA-Low		LPS-High	CAD-Low		
BAP			CHCL3-High		
BEN-High			CHEX-High		
BEN-Low			CHEX-Low		
BUS			CLOZ-High		
CAD-High			CLOZ-Low		
CAR			CYCA-High		
CHCL3-Low			DEX-Low		
CHLOR-High			ERY-High		
CHLOR-Low			GAN-Low		
CIS-High			GEN-Low		
CIS-Low			HYD-Low		
CLO-High			PHEN-High		
CLO-Low			PUR-High		
CMC			PUR-Low		
CPHOS-High			QUIN-High		
CPHOS-Low			TET-Low		
CYCA-Low			THEO-High		
DEX-High					
DIF-High					
DIF-Low					
DOX					
ERY-Low					
EST-High					
EST-Low					
ETH					
GAN-High					
GEN-High					
HYD-High					

ISON-High					
ISON-Low					
KETO-High					
KETO-Low					
LPS-Low					
MET					
NAL-High					
NAL-Low					
PBARB-High					
PBARB-Low					
PEG					
PHEN-Low					
QUIN-Low					
STRZ-High					
STRZ-Low					
TAM-High					
TAM-Low					

Training and Test Set 2

Training Set 2 Negative	Training Set 2 Positive- Necrosis	Training Set 2 Positive- Necrosis with Inflammation	Test Set 2 Negative	Test Set 2 Positive- Necrosis	Test Set 2 Positive- Necrosis with Inflammation
PEG	CCL4-Low	AFLB	ANIT-Low	APAP-High	DMN
5-FU-High	TET-High	ANIT-High	APAP-Low		BRB-Low
5-FU-Low		BRB-High	BAP		
AMPB-High		CCL4-High	BEN-High		
AMPB-Low		LPS-High	CHEX-Low		
AZA-High			CIS-High		
AZA-Low			CLO-Low		
BEN-Low			CMC		
BUS			CPHOS-Low		
CAD-High			CYCA-High		
CAD-Low			DEX-Low		
CAR			EST-Low		
CHCL3-High			GEN-Low		
CHCL3-Low			ISON-Low		
CHEX-High			LPS-Low		
CHLOR-High			NAL-High		

CHLOR-Low			PBARB-High		
CIS-Low			PUR-Low		
CLO-High			QUIN-High		
CLOZ-High			STRZ-High		
CLOZ-Low			STRZ-Low		
CPHOS-High			THEO-Low		
CYCA-Low					
DEX-High					
DIF-High					
DIF-Low					
DOX					
ERY-High					
ERY-Low					
EST-High					
ETH					
GAN-High					
GAN-Low					
GEN-High					
HYD-High					
HYD-Low					
ISON-High					
KETO-High					
KETO-Low					
MET					
NAL-Low					
PBARB-Low					
PHEN-High					
PHEN-Low					
PUR-High					
QUIN-Low					
TAM-High					
TAM-Low					
TET-Low					
THEO-High					

Training Set 3 Negative	Training Set 3 Positive- Necrosis	Training Set 3 Positive- Necrosis with Inflammation	Test Set 3 Negative	Test Set 3 Positive- Necrosis	Test Set 3 Positive- Necrosis with Inflammation
5-FU-High	APAP-High	AFLB	AMPB-Low	TET-High	LPS-High
5-FU-Low	CCL4-Low	ANIT-High	ANIT-Low		CCL4-High
AMPB-High		BRB-High	AZA-Low		
APAP-Low		BRB-Low	BEN-Low		
AZA-High		DMN	CHCL3-Low		
BAP			CHEX-High		
BEN-High			CIS-Low		
BUS			CLO-High		
CAD-High			CLO-Low		
CAD-Low			CYCA-Low		
CAR			DIF-High		
CHCL3-High			ERY-Low		
CHEX-Low			EST-Low		
CHLOR-High			GAN-High		
CHLOR-Low			GAN-Low		
CIS-High			HYD-Low		
CLOZ-High			ISON-Low		
CLOZ-Low			LPS-Low		
CMC			NAL-Low		
CPHOS-High			PUR-Low		
CPHOS-Low			STRZ-High		
CYCA-High			STRZ-Low		
DEX-High					
DEX-Low					
DIF-Low					
DOX					
ERY-High					
EST-High					
ETH					
GEN-High					
GEN-Low					
HYD-High					
ISON-High					
KETO-High					
KETO-Low					
MET					
NAL-High					
PBARB-High					
PBARB-Low					

PEG					
PHEN-High					
PHEN-Low					
PUR-High					
QUIN-High					
QUIN-Low					
TAM-High					
TAM-Low					
TET-Low					
THEO-High					
THEO-Low					

Training and Test Set 4

Training Set 4 Negative	Training Set 4 Positive- Necrosis	Training Set 4 Positive- Necrosis with Inflammation	Test Set 4 Negative	Test Set 4 Positive- Necrosis	Test Set 4 Positive- Necrosis with Inflammation
AMPB-High	APAP-High	AFLB	5-FU-High	CCL4-Low	ANIT-High
ANIT-Low	TET-High	BRB-High	5-FU-Low		LPS-High
AZA-High		BRB-Low	AMPB-Low		
AZA-Low		CCL4-High	APAP-Low		
BAP		DMN	BEN-High		
BEN-Low			CHLOR-Low		
BUS			CIS-High		
CAD-High			CIS-Low		
CAD-Low			CLO-High		
CAR			CPHOS-High		
CHCL3-High			CYCA-High		
CHCL3-Low			CYCA-Low		
CHEX-High			ERY-High		
CHEX-Low			ERY-Low		
CHLOR-High			ISON-High		
CLO-Low			ISON-Low		
CLOZ-High			KETO-Low		
CLOZ-Low			PBARB-Low		
CMC			PHEN-Low		
CPHOS-Low			QUIN-Low		
DEX-High			TET-Low		
DEX-Low			THEO-Low		
DIF-High					

DIF-Low					
DOX					
EST-High					
EST-Low					
ETH					
GAN-High					
GAN-Low					
GEN-High					
GEN-Low					
HYD-High					
HYD-Low					
KETO-High					
LPS-Low					
MET					
NAL-High					
NAL-Low					
PBARB-High					
PEG					
PHEN-High					
PUR-High					
PUR-Low					
QUIN-High					
STRZ-High					
STRZ-Low					
TAM-High					
TAM-Low					
THEO-High					

Training and Test Set 5

Training Set 5 Negative	Training Set 5 Positive- Necrosis	Training Set 5 Positive- Necrosis with Inflammation	Test Set 5 Negative	Test Set 5 Positive- Necrosis	Test Set 5 Positive- Necrosis with Inflammation
TAM-Low	APAP-High	ANIT-High	AMPB-Low	TET-High	BRB-Low
CAR	CCL4-Low	BRB-High	ANIT-Low		AFLB
5-FU-High		CCL4-High	AZA-Low		
5-FU-Low		DMN	BEN-Low		
AMPB-High		LPS-High	CAD-Low		
APAP-Low			CHCL3-Low		
AZA-High			CHLOR-High		

BAP			CIS-High		
BEN-High			DEX-Low		
BUS			DIF-High		
CAD-High			EST-Low		
CHCL3-High			GAN-High		
CHEX-High			GAN-Low		
CHEX-Low			GEN-High		
CHLOR-Low			HYD-High		
CIS-Low			ISON-High		
CLO-High			KETO-High		
CLO-Low			NAL-High		
CLOZ-High			PBARB-Low		
CLOZ-Low			STRZ-High		
CMC			TET-Low		
CPHOS-High			THEO-High		
CPHOS-Low					
CYCA-High					
CYCA-Low					
DEX-High					
DIF-Low					
DOX					
ERY-High					
ERY-Low					
EST-High					
ETH					
GEN-Low					
HYD-Low					
ISON-Low					
KETO-Low					
LPS-Low					
MET					
NAL-Low					
PBARB-High					
PEG					
PHEN-High					
PHEN-Low					
PUR-High					
PUR-Low					
QUIN-High					
QUIN-Low					
STRZ-Low					
TAM-High					
THEO-Low					

Table 21 List of Genes, Whose Expression at 72 h Directly Correlates
with Liver Inflammation at 72h, Ranked by Pearson Correlation Coefficient

Gene	Correlation Coefficient
Osteoactivin	0.780
Calpactin I heavy chain	0.719
IgE binding protein	0.686
Thymosin beta-10	0.672
Stathmin	0.666
Alpha-tubulin	0.643
Gamma-actin, cytoplasmic	0.636
14-3-3 zeta	0.630
Phase-1 RCT-179	0.630
High affinity IgE receptor gamma chain (FcERlgamma)	0.627
Uncoupling protein 2	0.626
Voltage-dependent anion channel 2 (Vdac2)	0.624
Phase-1 RCT-154	0.622
Melanoma-associated antigen ME491	0.619
Phase-1 RCT-121	0.612
Phase-1 RCT-138	0.600
Phase-1 RCT-192	0.597
Phase-1 RCT-68	0.587
Phase-1 RCT-24	0.574
Beta-tubulin, class I	0.562
Beta-actin	0.550
Beta-actin, sequence 2	0.549
60S ribosomal protein L6	0.549
Cofilin	0.549
Pyruvate kinase, muscle	0.547
Phase-1 RCT-146	0.514
Phase-1 RCT-207	0.513
Organic cation transporter 3	0.506
Phase-1 RCT-293	0.504
Phase-1 RCT-12	0.502
Phase-1 RCT-211	0.502
Annexin V	0.499
Calpain 2	0.490
Multidrug resistant protein-1	0.489
Multidrug resistant protein-2	0.486
Cathepsin S	0.484
Phase-1 RCT-144	0.484
Cyclin D1	0.479
60S ribosomal protein L6 (alternate clone 1)	0.479
Biliverdin reductase	0.477

Nucleoside diphosphate kinase beta isoform	0.477
Collagen type II	0.467
Cyclin G	0.458
Cathepsin B	0.454
Phase-1 RCT-59	0.449
Ribosomal protein S8	0.445
Proliferating cell nuclear antigen gene	0.442
Phase-1 RCT-109	0.440
Hypoxanthine-guanine phosphoribosyltransferase	0.438
Tissue inhibitor of metalloproteinases-1	0.435
Poly(ADP-ribose) polymerase	0.434
Ribosomal protein S9	0.433
Tissue plasminogen activator	0.419
Adenine nucleotide translocator 1	0.415
Alpha-prothymosin	0.409
Ribosomal protein S17	0.407
Heme oxygenase	0.404
p53CDC	0.403
ID-1	0.403
Zinc finger protein	0.401

Table 22 List of Genes, Whose Expression at 72 h Inversely Correlates with Liver Inflammation at 72h, Ranked by Spearman Correlation Coefficient

Gene	Correlation Coefficient
Phase-1 RCT-181	-0.250
Apolipoprotein C1	-0.251
Hepatic lipase	-0.253
Tryptophan hydroxylase	-0.253
Tissue factor	-0.254
Monoamine oxidase B	-0.255
Choline kinase	-0.256
CDK108	-0.257
Phase-1 RCT-88	-0.259
Cholesterol esterase	-0.260
Vesicular monoamine transporter (VMAT)	-0.260
Glucokinase	-0.261
Interferon inducible protein 10	-0.264
Cytochrome P450 2D18	-0.264
Aldehyde dehydrogenase 2	-0.265
Phase-1 RCT-93	-0.265
Connexin-32	-0.267
Phase-1 RCT-178	-0.267
Phase-1 RCT-239	-0.268
Phase-1 RCT-289	-0.270
C-reactive protein	-0.271
Urinary protein 2 precursor	-0.273
Matrin F/G	-0.274
L-gulonogamma-lactone oxidase	-0.276
Epidermal growth factor	-0.278
Tyrosine hydroxylase	-0.282
Aquaporin-3 (AQP3)	-0.283
Gap junction membrane channel protein beta 1 (Gjb1)	-0.283
Phase-1 RCT-38	-0.287
NADH-cytochrome b5 reductase	-0.287
Phase-1 RCT-256	-0.288
Phase-1 RCT-36	-0.292
Phase-1 RCT-271	-0.293
Acetylcholine receptor epsilon	-0.293
Phase-1 RCT-73	-0.293
Phase-1 RCT-184	-0.295
Contrapsin-like protease inhibitor (CPI-21)	-0.297
Phase-1 RCT-280	-0.299
Presenilin-1	-0.300
BRCA1	-0.303
Phase-1 RCT-219	-0.305

Cytochrome P450 2A3	-0.306
Phase-1 RCT-161	-0.306
Alpha 1 - inhibitor III	-0.307
Cytochrome P450 3A1	-0.307
Carbonic anhydrase III	-0.308
Aryl sulfotransferase	-0.308
Acetyl-CoA carboxylase	-0.310
Insulin-like growth factor I	-0.313
Phase-1 RCT-67	-0.313
Protein tyrosine phosphatase, receptor type, D	-0.314
Phase-1 RCT-285	-0.315
Phase-1 RCT-123	-0.316
Phase-1 RCT-98	-0.317
Arginosuccinate synthetase 1	-0.319
Phase-1 RCT-83	-0.319
Cytochrome P450 2C11	-0.320
Phase-1 RCT-149	-0.320
Phase-1 RCT-227	-0.325
Phase-1 RCT-102	-0.330
Phase-1 RCT-48	-0.330
Phase-1 RCT-29	-0.331
Betaine homocysteine methyltransferase (BHMT)	-0.335
Stearyl-CoA desaturase, liver	-0.337
Phase-1 RCT-292	-0.337
Apolipoprotein CIII	-0.339
Fatty acid synthase	-0.340
Phase-1 RCT-164	-0.354
Phase-1 RCT-81	-0.354
JNK1 stress activated protein kinase	-0.355
Phase-1 RCT-260	-0.355
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	-0.361
Phase-1 RCT-290	-0.361
Insulin-like growth factor I, exon 6	-0.361
Phase-1 RCT-117	-0.363
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	-0.363
Glycine methyltransferase	-0.370
Phase-1 RCT-107	-0.378
Apolipoprotein AII	-0.381
Dynamin-1 (D100)	-0.391
Alpha-2-microglobulin	-0.395
Phase-1 RCT-78	-0.402

Table 23 List of genes whose expression at 72 hours is predictive of liver inflammation at 72 hours

Gene	Combinations (No of Occurrences)
Osteoactivin	5
Phase-1 RCT-211	5
Calpactin I heavy chain	5
Phase-1 RCT-179	5
Gamma-actin, cytoplasmic	5
Cofilin	4
Stathmin	4
60S ribosomal protein L6	4
Voltage-dependent anion channel 2 (Vdac2)	4
Phase-1 RCT-192	4
Adenine nucleotide translocator 1	4
Thymosin beta-10	4
High affinity IgE receptor gamma chain (FcERIgamma)	4
Uncoupling protein 2	4
IgE binding protein	4
Alpha-tubulin	4
Phase-1 RCT-12	4
Ribosomal protein S9	4
Phase-1 RCT-121	4
14-3-3 zeta	4
Beta-tubulin, class I	4
Phase-1 RCT-154	4
Phase-1 RCT-107	3
Proliferating cell nuclear antigen gene	3
Phase-1 RCT-59	3
Beta-actin, sequence 2	3
Phase-1 RCT-109	3
Carbonic anhydrase III	3
Phase-1 RCT-78	3
Collagen type II	3
Cyclin D1	3
Phase-1 RCT-138	3
Alpha-prothymosin	3
Calpain 2	3
Cathepsin B	3
Phase-1 RCT-24	3
Melanoma-associated antigen ME491	3
Phase-1 RCT-68	3
Cyclin G	3
Tissue inhibitor of metalloproteinases-1	3

Heme oxygenase	3
Ribosomal protein S17	3
Organic cation transporter 3	3
Biliverdin reductase	3
Phase-1 RCT-293	3
Phase-1 RCT-173	3
Betaine homocysteine methyltransferase (BHMT)	2
Cytochrome P450 2D18	2
Cytochrome P450 2C11	2
Phase-1 RCT-290	2
Pyruvate kinase, muscle	2
Apolipoprotein AII	2
Connexin-32	2
Glycine methyltransferase	2
Insulin-like growth factor I	2
Zinc finger protein	2
Hypoxanthine-guanine phosphoribosyltransferase	2
ID-1	2
Ribosomal protein S8	2
Nucleoside diphosphate kinase beta isoform	2
60S ribosomal protein L6 (alternate clone 1)	2
Beta-actin	2
Cathepsin S	2
Annexin V	2
Phase-1 RCT-276	2
Tyrosine aminotransferase	2
Phase-1 RCT-161	2
Multidrug resistant protein-2	2
DNA polymerase beta	2
Ubiquitin conjugating enzyme (RAD 6 homologue)	2
Ribosomal protein L13A	2
Phase-1 RCT-144	2
c-H-ras	2
Vesicular monoamine transporter (VMAT)	2
Phase-1 RCT-273	2
Phase-1 RCT-80	2
Phase-1 RCT-260	2
Neuronal cell adhesion molecule (NrCAM)	2
Hepatocyte growth factor receptor	2
Caveolin-3	2
Phase-1 RCT-129	2
Phase-1 RCT-146	2
Phase-1 RCT-292	1
L-gulono-gamma-lactone oxidase	1
Phase-1 RCT-256	1
Urinary protein 2 precursor	1
Aryl sulfotransferase	1

Phase-1 RCT-185	1
Phase-1 RCT-34	1
Phase-1 RCT-31	1
Complement factor I (CFI)	1
Glutathione peroxidase	1
Histidine-rich glycoprotein	1
Carbonic anhydrase III, sequence 2	1
Phase-1 RCT-92	1
Transitional endoplasmic reticulum ATPase	1
Phase-1 RCT-88	1
Phase-1 RCT-296	1
Glutathione S-transferase theta-1	1
Phase-1 RCT-168	1
Phase-1 RCT-182	1
JNK1 stress activated protein kinase	1
Phase-1 RCT-81	1
Phase-1 RCT-33	1
Phase-1 RCT-178	1
Apolipoprotein CIII	1
Phase-1 RCT-98	1
NADH-cytochrome b5 reductase	1
Alpha 1 - inhibitor III	1
Phase-1 RCT-233	1
Paraoxonase 1	1
Presenilin-1	1
Apolipoprotein C1	1
Cytochrome P450 2C23	1
Phase-1 RCT-227	1
Hepatic lipase	1
Phase-1 RCT-164	1
Insulin-like growth factor I, exon 6	1
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1
Dynamin-1 (D100)	1
Phase-1 RCT-230	1
Phase-1 RCT-74	1
Phase-1 RCT-158	1
Deoxycytidine kinase	1
Dopamine receptor D2	1
Phase-1 RCT-51	1
Four repeat ion channel	1
Adrenomedullin	1
Phase-1 RCT-94	1
Sarcoplasmic reticulum calcium ATPase	1
Phase-1 RCT-79	1
Phase-1 RCT-252	1
Phase-1 RCT-151	1
Phase-1 RCT-70	1

Phase-1 RCT-150	1
25-hydroxyvitamin D3-1 alpha-hydroxylase	1
Phase-1 RCT-119	1
Peroxisomal 3-ketoacyl-CoA thiolase 2	1
Superoxide dismutase Mn	1
Phase-1 RCT-115	1
Alpha-1 microglobulin/bikunin precursor (Ambp)	1
Phase-1 RCT-18	1
Maspin	1
Decorin	1
Retinoid X receptor alpha	1
Cellular nucleic acid binding protein (CNBP)	1
NADPH cytochrome P450 oxidoreductase	1
Malic enzyme	1
Caspase 1	1
Cystatin C	1
p55CDC	1
Poly(ADP-ribose) polymerase	1
Tissue plasminogen activator	1
Multidrug resistant protein-1	1
Phase-1 RCT-207	1
Phase-1 RCT-181	1
Gap junction membrane channel protein beta 1 (Gjb1)	1
Aquaporin-3 (AQP3)	1
Myelin basic protein	1
Phase-1 RCT-213	1
Phase-1 RCT-156	1
Proteasome activator 28 alpha	1

Table 24 Comparison of Predictivity for True Liver Inflammation Classification and Random Classification Using Combo Gene Sets and 72h data

Gene List*	Overall Accuracy**							
	Correct Classification				Random Classification			
	Mean	Min	-	Max	Mean	Min.	-	Max.
Combo All	0.752	(0.625	-	0.847)	0.368	(0.250	-	0.459)
Combo 5	0.672	(0.589	-	0.722)	0.363	(0.295	-	0.419)
Combo 4	0.793	(0.694	-	0.917)	0.344	(0.222	-	0.458)
Combo 3	0.793	(0.639	-	0.905)	0.333	(0.250	-	0.392)
Combo 2	0.708	(0.597	-	0.819)	0.349	(0.288	-	0.473)
Combo 1	0.675	(0.608	-	0.708)	0.377	(0.208	-	0.466)

Table 25 RCT genes (ESTs) Predictive for Liver Inflammation:
Best Homology Matches

Gene Name	Homology
Phase-1 RCT-10	Rattus norvegicus methylmalonate semialdehyde dehydrogenase gene (Mmsdh)
Phase-1 RCT-102	Mouse pentylentetrazol-related mRNA PTZ-17 (3'UTR of E3.1)
Phase-1 RCT-103	no significant homology found
Phase-1 RCT-107	no significant homology found
Phase-1 RCT-108	no significant homology found
Phase-1 RCT-109	Rattus norvegicus nesprin-1 mRNA
Phase-1 RCT-111	Mus musculus B lymphoid kinase (Blk)
Phase-1 RCT-112	no significant homology found
Phase-1 RCT-113	no significant homology found
Phase-1 RCT-114	Mus musculus, glypican 4, clone MGC:11506 IMAGE:3967797, mRNA, complete cds
Phase-1 RCT-115	no significant homology found
Phase-1 RCT-117	no significant homology found
Phase-1 RCT-119	no significant homology found
Phase-1 RCT-12	no significant homology found
Phase-1 RCT-121	no significant homology found
Phase-1 RCT-123	no significant homology found
Phase-1 RCT-127	no significant homology found
Phase-1 RCT-128	Mus musculus angiopoietin-related protein 3 (Angptl3)
Phase-1 RCT-129	Mus musculus Nedd4 WW binding protein 4 (N4wbp4-pending), mRNA
Phase-1 RCT-13	Mus musculus 0 day neonate skin cDNA, RIKEN full-length enriched library, clone:4632417K18, full insert sequence
Phase-1 RCT-136	Mus musculus RIKEN cDNA 3010027G13 gene (3010027G13Rik), mRNA
Phase-1 RCT-137	Mus musculus adult male tongue cDNA
Phase-1 RCT-138	Mus musculus DAP10 (Dap10) gene
Phase-1 RCT-140	Mouse 13 days embryo head cDNA, RIKEN full-length enriched library, clone:3100001I08
Phase-1 RCT-141	Mus musculus proteoglycan 3 (megakaryocyte stimulating factor, articular superficial zone protein) (Prg4)

Phase-1 RCT-142	Mus musculus 18 days embryo cDNA, RIKEN full-length enriched library, clone:1190008J14
Phase-1 RCT-143	Homo sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 8 (23kD) (NADH-coenzyme Q reductase) (NDUFS8)
Phase-1 RCT-144	Mus musculus, similar to nucleolar protein (KKE/D repeat), clone IMAGE:3491448, mRNA, partial cds.
Phase-1 RCT-145	Mus musculus 10 day old male pancreas cDNA, RIKEN full-length enriched library, clone:1810014B19, full insert sequence
Phase-1 RCT-146	Mus musculus 8 days embryo cDNA, RIKEN full-length enriched library, clone:5730458E20
Phase-1 RCT-148	Mus musculus adult male kidney cDNA, RIKEN full-length enriched library, clone:0610010B16
Phase-1 RCT-15	Mus musculus ubiquitin conjugating enzyme 7 mRNA, complete cds
Phase-1 RCT-150	Mus musculus SIR2L3 isoform B (Sir2L3) mRNA, complete cds;alternatively spliced
Phase-1 RCT-151	Mus musculus, Similar to sphingomyelin phosphodiesterase 1, acid lysosomal, clone MGC:11522 IMAGE:3964394
Phase-1 RCT-152	Mus musculus, eukaryotic translation elongation factor 1 beta 2, clone MGC:6763 IMAGE:3600850, mRNA, complete cds.
Phase-1 RCT-154	Mus musculus vacuolar ATPase subunit D (Atp6m) mRNA, complete cds
Phase-1 RCT-156	no significant homology found
Phase-1 RCT-158	Rattus norvegicus cyclin-dependent kinase inhibitor 1B
Phase-1 RCT-161	Mus musculus adult male spleen cDNA, RIKEN full-length enriched library, clone:0910001D19
Phase-1 RCT-164	Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:4932443D16
Phase-1 RCT-166	Mus musculus, Similar to glutathione S-transferase theta 1, clone MGC:6769 IMAGE:3601446
Phase-1 RCT-168	M.musculus mRNA for low density lipoprotein receptor, ACCESSION X64414 S51850
Phase-1 RCT-169	Mus musculus, small inducible cytokine B subfamily (Cys-X-Cys), member 9, clone MGC:6179 IMAGE:3257716, mRNA, complete
Phase-1 RCT-173	Mus musculus NADP+-specific isocitrate dehydrogenase mRNA, complete cds; nuclear gene for mitochondrial product
Phase-1 RCT-174	Homo sapiens normal mucosa of esophagus specific 1 (NMES1) mRNA, complete cds; nuclear gene for mitochondrial product
Phase-1 RCT-175	Mus musculus RIKEN cDNA 1190017B19 gene (1190017B19Rik), mRNA,
Phase-1 RCT-178	Mus musculus, thioether S-methyltransferase, clone MGC:19191 IMAGE:4236077, mRNA, complete cds

Phase-1 RCT-179	Rat nucleolar protein B23.2 mRNA
Phase-1 RCT-18	no significant homology found
Phase-1 RCT-180	Mus musculus B-cell receptor-associated protein 37 (Bcap37
Phase-1 RCT-181	Mus musculus adult male testis cDNA
Phase-1 RCT-182	Rattus norvegicus glb mRNA for diacetyl/L-xylulose reductase
Phase-1 RCT-184	no significant homology found
Phase-1 RCT-185	no significant homology found
Phase-1 RCT-189	Rattus norvegicus eukaryotic translation initiation factor 4E (Eif4e), mRNA
Phase-1 RCT-191	Mus musculus, Similar to proteasome (prosome, macropain) 26S subunit, non-ATPase, 3, clone MGC:6405 IMAGE:3586427, mRNA, complete cds
Phase-1 RCT-192	Mus musculus 18 days embryo cDNA, RIKEN full-length enriched library, clone:1110033J19
Phase-1 RCT-195	Mus musculus, Similar to protein kinase C substrate 80K-H, clone MGC:13908 IMAGE:4008182, mRNA, complete cds
Phase-1 RCT-196	Homolous to Mus musculus 12 days embryo head cDNA, RIKEN full-length enriched library, clone:3010001M15
Phase-1 RCT-197	Rattus norvegicus Protein kinase, interferon-inducible double stranded RNA dependent (Prkr), mRNA
Phase-1 RCT-202	Mus musculus, Similar to hypothetical protein AB030201, clone MGC:18837 IMAGE:4211629, mRNA, complete cds
Phase-1 RCT-204	Mouse DNA sequence from clone RP23-138F20 on chromosome 13, complete sequence [Mus musculus]
Phase-1 RCT-205	no significant homology found
Phase-1 RCT-207	Mus musculus Ran binding protein 5 mRNA, partial cds
Phase-1 RCT-209	Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:4930583H14, full insert sequence
Phase-1 RCT-211	Mus musculus adult male kidney cDNA, RIKEN full-length enriched library, clone:0610009C22
Phase-1 RCT-212	Mus musculus nuclear localization signal protein absent in velo-cardio-facial patients (Nlvcf)
Phase-1 RCT-213	Homo sapiens pM5 protein (PM5), mRNA
Phase-1 RCT-214	Mus musculus putative NAD(P)H steroid dehydrogenase mRNA
Phase-1 RCT-215	Mus musculus RAB/Rip protein mRNA
Phase-1 RCT-218	no significant homology found
Phase-1 RCT-219	Rattus norvegicus 2'5' oligoadenylate synthetase-2 mRNA, complete cds
Phase-1 RCT-22	Mus musculus, clone MGC:19042 IMAGE:4188988, mRNA

Phase-1 RCT-221	no significant homology found
Phase-1 RCT-225	Rattus norvegicus chromosome 4 clone RP31-327J16 strain Brown Norway, complete sequence
Phase-1 RCT-227	no significant homology found
Phase-1 RCT-230	Mus musculus GDP-dissociation inhibitor mRNA, preferentially expressed in hematopoietic cells, complete cds
Phase-1 RCT-233	no significant homology found
Phase-1 RCT-235	Rattus villosissimus RT1.Ba gene, RT1.Ba-R154 allele, intron b, complete sequence
Phase-1 RCT-239	Mus musculus adult male tongue cDNA, RIKEN full-length enriched library, clone:2300007B01, full insert sequence
Phase-1 RCT-24	Mus musculus, tubulin alpha 8, clone MGC:28850 IMAGE:4507364, mRNA,
Phase-1 RCT-240	Mus musculus, clone MGC:7041
Phase-1 RCT-241	Mus musculus oncostatin receptor (Osmr), mRNA
Phase-1 RCT-242	Rattus norvegicus B-cell translocation gene 2, anti-proliferative(Btg2),
Phase-1 RCT-25	Mouse DNA sequence from clone RP23-278F12 on chromosome 11, complete sequence
Phase-1 RCT-251	no significant homology found
Phase-1 RCT-252	Mus musculus EH-domain containing 3 (Ehd3),
Phase-1 RCT-256	Mus musculus, Similar to betaine-homocysteine methyltransferase 2, clone MGC:19186 IMAGE:4235455
Phase-1 RCT-258	Mus musculus, clone MGC:6139 IMAGE:3487295, mRNA
Phase-1 RCT-259	Mus musculus adult female placenta cDNA, RIKEN full-length enriched library, clone:1600023I01:interferon-stimulated protein (20 kDa), full insert sequence
Phase-1 RCT-260	Mus musculus adult male hippocampus cDNA, RIKEN full-length enriched library, clone:2900024P20
Phase-1 RCT-261	no significant homology found
Phase-1 RCT-264	Mus musculus sodium-sulfate cotransporter (Nas1) gene
Phase-1 RCT-27	Mus musculus adult male kidney cDNA
Phase-1 RCT-270	Mus musculus, RIKEN cDNA 2010011I20 gene, clone MGC:27703, IMAGE:4924329, mRNA, complete cds
Phase-1 RCT-271	Homologous to Mus musculus, clone MGC:27581 IMAGE:4489072, mRNA
Phase-1 RCT-273	no significant homology found
Phase-1 RCT-276	Homo sapiens KIAA1224 protein
Phase-1 RCT-278	Mus musculus brain protein 17 (Brp17), mRNA
Phase-1 RCT-28	no significant homology found
Phase-1 RCT-280	Mus musculus carbohydrate (keratan sulfate Gal-6) sulfotransferase 1 (Chst1),

Phase-1 RCT-281	Mus musculus, Similar to TNF-induced protein, clone MGC:11714
Phase-1 RCT-282	Mus musculus, SEC61, alpha subunit 2 (S. cerevisiae), clone MGC:6359 IMAGE:3494001, mRNA, complete cds
Phase-1 RCT-287	Mus musculus adult male kidney cDNA clone:0610010I20
Phase-1 RCT-288	no significant homology found
Phase-1 RCT-289	Mus musculus adult male liver cDNA, RIKEN full-length enriched library, clone:1300003K24, full insert sequence
Phase-1 RCT-29	no significant homology found
Phase-1 RCT-290	Homo sapiens chromosome 14 clone BAC 201F1 map 14q24.3, complete sequence
Phase-1 RCT-291	no significant homology found
Phase-1 RCT-292	Rattus norvegicus 2'5' oligoadenylate synthetase-2
Phase-1 RCT-293	Mus musculus 18 days embryo cDNA, RIKEN full-length enriched library, clone:1110021C22
Phase-1 RCT-294	Mus musculus adult male cerebellum cDNA, RIKEN full-length enriched library, clone:1500035D08:vesicle-associated membrane protein 1, full insert sequence
Phase-1 RCT-296	Mus musculus corticosteroid binding globulin (Cbg)
Phase-1 RCT-297	Mus musculus squalene epoxidase (Sqle), H
Phase-1 RCT-3	no significant homology found
Phase-1 RCT-30	Homo sapiens putative protein-tyrosine kinase (LOC51086),
Phase-1 RCT-31	Mouse 10, 11 days embryo cDNA, RIKEN full-length enriched library, clone:2810437P06
Phase-1 RCT-32	no significant homology found
Phase-1 RCT-33	no significant homology found
Phase-1 RCT-34	no significant homology found
Phase-1 RCT-36	no significant homology found
Phase-1 RCT-37	no significant homology found
Phase-1 RCT-38	Mus musculus betaine-homocysteine methyltransferase 2 (Bhmt2) mRNA,
Phase-1 RCT-40	Rattus norvegicus Cathepsin C (dipeptidyl peptidase I) (Ctsc)
Phase-1 RCT-42	Mus musculus STAT5B (Stat5b)
Phase-1 RCT-43	no significant homology found
Phase-1 RCT-45	Mus musculus Nedd4-binding brain specific protein BEAN mRNA, partial cds
Phase-1 RCT-48	Mus musculus adult male liver cDNA, RIKEN full-length enriched library, clone:1300003K24, full insert sequence
Phase-1 RCT-49	No match with score above 200
Phase-1 RCT-50	Mus musculus fibroblast growth factor regulated protein 2
Phase-1 RCT-51	Rattus norvegicus unknown Glu-Pro dipeptide repeat protein
Phase-1 RCT-52	Rattus norvegicus D5d mRNA for delta-5 fatty acid desaturase
Phase-1 RCT-53	no significant homology found
Phase-1 RCT-54	Mus musculus 10 days embryo cDNA, RIKEN full-length enriched library, clone:2610007A05, full insert sequence
Phase-1 RCT-55	M.musculus myoglobin gene exons 2-3
Phase-1 RCT-56	M.musculus myoglobin gene exons 2-3
Phase-1 RCT-59	no significant homology found
Phase-1 RCT-60	Mouse, Similar to tyrosyl-tRNA synthetase, clone MGC:19350

Phase-1 RCT-62	no significant homology found
Phase-1 RCT-63	no significant homology found
Phase-1 RCT-64	no significant homology found
Phase-1 RCT-65	no significant homology found
Phase-1 RCT-66	M.musculus mRNA for low density lipoprotein receptor
Phase-1 RCT-67	no significant homology found
Phase-1 RCT-68	Rattus norvegicus nucleosome assembly protein mRNA
Phase-1 RCT-70	Mus musculus adult male testis cDNA, RIKEN full-length enriched library, clone:4933406P04, full insert sequence
Phase-1 RCT-71	Mus musculus, clone MGC:11987 IMAGE:3601737, mRNA
Phase-1 RCT-72	no significant homology found
Phase-1 RCT-73	no significant homology found
Phase-1 RCT-74	no significant homology found
Phase-1 RCT-75	Mus musculus adult male liver cDNA, RIKEN full-length enriched library, clone:1300002K09, full insert sequence
Phase-1 RCT-76	no significant homology found
Phase-1 RCT-77	Mus musculus, Similar to hypothetical protein AB030201, clone MGC:18837 IMAGE:4211629, mRNA, complete cds
Phase-1 RCT-78	Mus musculus adult male lung cDNA, RIKEN full-length enriched library, clone:1200015G06, full insert sequence
Phase-1 RCT-79	no significant homology found
Phase-1 RCT-8	Messenger RNA for rat preproalbumin
Phase-1 RCT-80	no significant homology found
Phase-1 RCT-81	no significant homology found
Phase-1 RCT-82	Mus musculus nucleosome binding protein 1 (Nsbp1),
Phase-1 RCT-83	no significant homology found
Phase-1 RCT-88	no significant homology found
Phase-1 RCT-89	no significant homology found
Phase-1 RCT-9	Mus musculus adult male liver cDNA, RIKEN full-length enriched library, clone:1300003M23, full insert sequence
Phase-1 RCT-90	no significant homology found
Phase-1 RCT-91	no significant homology found
Phase-1 RCT-92	no significant homology found
Phase-1 RCT-94	Rattus norvegicus Glutamate receptor, metabotropic 5 (Grm5)
Phase-1 RCT-95	no significant homology found
Phase-1 RCT-96	Mus musculus, ADP-ribosylation factor 3, clone MGC:6687 IMAGE:3582243, mRNA, complete cds,

Table 27 Liver Inflammation Predictive Genes Whose Protein Products Are Known to be Secreted
Adrenomedullin
Alpha 1 - inhibitor III
Alpha-1 acid glycoprotein
Alpha-1 microglobulin/bikunin precursor (Ambp)
Alpha-2-macroglobulin, sequence 2
Alpha-2-microglobulin
Alpha-fetoprotein
Apolipoprotein AII
Apolipoprotein C1
Apolipoprotein CIII
Apolipoprotein E
Ceruloplasmin
Ciliary neurotrophic factor
Colony-stimulating factor-1
Complement component C3
Complement factor I (CFI)
Histidine-rich glycoprotein
Insulin-like growth factor binding protein 1
Insulin-like growth factor binding protein 5
Insulin-like growth factor I
Insulin-like growth factor I, exon 6
Inter-alpha-inhibitor H4 heavy chain (Itih4)
Interferon related developmental regulator IFRD1 (PC4)
Interleukin-10
Macrophage inflammatory protein-1 alpha
Macrophage inflammatory protein-2 alpha
Matrix metalloproteinase-1
NGF-inducible anti-proliferative putative secreted protein (PC3)
Osteopontin
Paraoxonase 1
Preproalbumin, sequence 2
Selenoprotein P
Stem cell factor
Tissue factor pathway inhibitor
Tissue inhibitor of metalloproteinases-1
Tissue plasminogen activator
Transthyretin
Urinary protein 2 precursor
Vascular endothelial growth factor

What is claimed is:

1. A method of predicting the liver toxicity in an individual to an agent comprising:

obtaining a biological sample from the individual treated with the agent; measuring the expression of one or more liver toxicity predictive genes in the sample, wherein the genes are selected from the group consisting of partial gene sequences of genes identified as responsive to agents causing liver inflammation, thereby generating a test expression profile; and

using the test expression profile with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

2. The method according to claim 1, wherein the liver toxicity predictive genes are selected from the group of partial gene sequences listed in Table26 that represent 24 hour combo All genes.

3. The method according to claim 2, wherein the partial gene sequences correspond to rat genes.

4. The method according to claim 2, wherein the partial gene sequences correspond to dog genes.

5. The method according to claim 2, wherein the partial gene sequences correspond to non-human primate genes.

6. The method according to claim 2, wherein the partial gene sequences correspond to human genes.

7. The method according to claim 1, wherein the liver toxicity predictive genes are selected from the group of partial gene sequences listed in Table26 that represent 24 hour combo 3 genes.

8. The method according to claim 7, wherein the partial gene sequences correspond to rat genes.
9. The method according to claim 7, wherein the partial gene sequences correspond to dog genes.
10. The method according to claim 7, wherein the partial gene sequences correspond to non-human primate genes.
11. The method according to claim 7, wherein the partial gene sequences correspond to human genes.
12. The method according to claim 1, wherein the liver toxicity predictive genes are selected from the group of partial gene sequences listed in Table 26 that represent 24 hour Combo 5 genes.
13. The method according to claim 12, wherein the partial gene sequences correspond to rat genes.
14. The method according to claim 12, wherein the partial gene sequences correspond to dog genes.
15. The method according to claim 12, wherein the partial gene sequences correspond to non-human primate genes.
16. The method according to claim 12, wherein the partial gene sequences correspond to human genes.
17. A method of predicting the liver toxicity of an agent using an in vitro system, comprising the steps of:
 - obtaining a biological sample from in-vitro cultured cells or explants treated with the agent;
 - measuring the expression of one or more liver toxicity predictive genes in the sample, wherein the genes are selected from the group consisting of partial

gene sequences of genes identified as responsive to agents causing liver inflammation, thereby generating a test expression profile; and

using the test expression profile with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

18. The method according to claim 17, wherein the liver toxicity predictive genes are selected from the group of partial gene sequences listed in Table 26 that represent 24 hour combo All genes.

19. The method according to claim 18, wherein the partial gene sequences correspond to rat genes.

20. The method according to claim 18, wherein the partial gene sequences correspond to dog genes.

21. The method according to claim 18, wherein the partial gene sequences correspond to non-human primate genes.

22. The method according to claim 18, wherein the partial gene sequences correspond to human genes.

23. The method according to claim 17, wherein the liver toxicity predictive genes are selected from the group comprising of 24 hour Combo 2 genes.

24. The method according to claim 23, wherein the partial gene sequences correspond to rat genes.

25. The method according to claim 23, wherein the partial gene sequences correspond to dog genes.

26. The method according to claim 23, wherein the partial gene sequences correspond to non-human primate genes.

27. The method according to claim 23, wherein the partial gene sequences correspond to human genes.

28. The method according to claim 17, wherein the liver toxicity predictive genes are selected from the group of partial gene sequences listed in Table 26 that represent 24 hour Combo 5 genes.

29. The method according to claim 28, wherein the partial gene sequences correspond to rat genes.

30. The method according to claim 28, wherein the partial gene sequences correspond to dog genes.

31. The method according to claim 28, wherein the partial gene sequences correspond to non-human primate genes.

32. The method according to claim 28, wherein the partial gene sequences correspond to human genes.

33. A process for predicting the liver toxicity in a biological sample from an individual, in-vitro cell cultures or explants to an agent via a programmable machine, the process comprising the steps of:

obtaining a biological sample treated with the agent;

measuring the expression of one or more liver toxicity predictive genes in the sample, wherein the genes are selected from the group consisting of partial gene sequences of genes identified as responsive to agents causing liver inflammation, thereby generating a test expression profile; and

using the test expression profile with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

34. A computer program product for enabling a computer to perform Predictive Model analysis for liver toxicity on a biological sample from an individual, in-vitro

cell cultures or explants to an agent, the computer program product comprising:

- software instructions for enabling the computer to perform predetermined operations, and a computer readable medium embodying the software instructions;

- the pre-determined operations comprising:

- measuring an expression of one or more liver toxicity predictive genes in a sample, wherein the genes are selected from the group consisting of partial gene sequences of genes identified as responsive to agents causing liver inflammation, thereby generating a test expression profile; and

- using the test expression profile with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

35. A Computer system adopted to predict liver toxicity in a biological sample from an individual, in-vitro cell cultures, or explants to an agent, comprising a processor and a memory including software instructions adapted to enable the computer system to perform operations comprising:

- measuring the expression of one or more liver toxicity predictive genes in the sample, wherein the genes are selected from the group consisting of partial gene sequences of genes identified as responsive to agents causing liver inflammation, thereby generating a test expression profile; and

- using the test expression profile with a set of reference expression profiles in a Predictive Model to determine whether the agent will induce liver toxicity in the individual.

36. A computer program product for predicting liver toxicity from a test sample expression profile, comprising:

- an encrypted training data set;

- encrypted lists of genes selected from genes predictive of liver toxicity to be used with the encrypted training data set, and

a Predictive Model that uses the encrypted training data sets, the encrypted lists of genes, and the test sample expression profile to predict the liver toxicity of the test sample.

37. The computer program product of claim 36, wherein the encrypted lists of genes are selected from any Combination Category appearing in Tables 5, 18 and 23.

38. The computer program product of claim 36, wherein the encrypted lists of genes comprise a 24 hour Combo All genes as set in Table 5.

39. The computer program product of claim 36, wherein the encrypted lists of genes comprise a 6 hour Combo All genes as set in Table 18.

40. The computer program product of claim 36, wherein the encrypted lists of genes comprise a 72 hour Combo All genes as set in Table 23.

41. A method for mining genes predictive for liver toxicity, comprising the steps of:

collecting expression levels of a plurality of candidate toxicity predictive genes among a multiplicity of samples;

defining a group of samples to be a training set;

defining another group of samples to be a test set;

optionally generating additional training and test sets; and

selecting a set of genes which are predictive of liver toxicity based on evaluating the training and test sets in a Predictive Model.

42. The method according to claim 41, wherein the expression levels are stored as a database on an electronic medium.

43. An integrated system for predicting liver toxicity, comprising:

means for measuring gene expression profiles of genes predictive of liver toxicity from biological samples exposed to a test agent; and

a computer system operably linked to the means wherein the computer system is capable of implementing a Predictive Model.

44. A method of identifying one or more liver inflammation predictive genes, the method comprising:

- providing a set of candidate toxicity predictive genes;
- evaluating said genes for their predictive performance with at least one training and test set of data in a Predictive Model to identify genes which are predictive of liver inflammation; and

- testing the performance of predictive genes for their ability to predict liver inflammation for: (i) different test sets of data, (ii) comparison of prediction for accurate versus random classification, and (iii) prediction using test data external to the data used to derive the predictive genes.

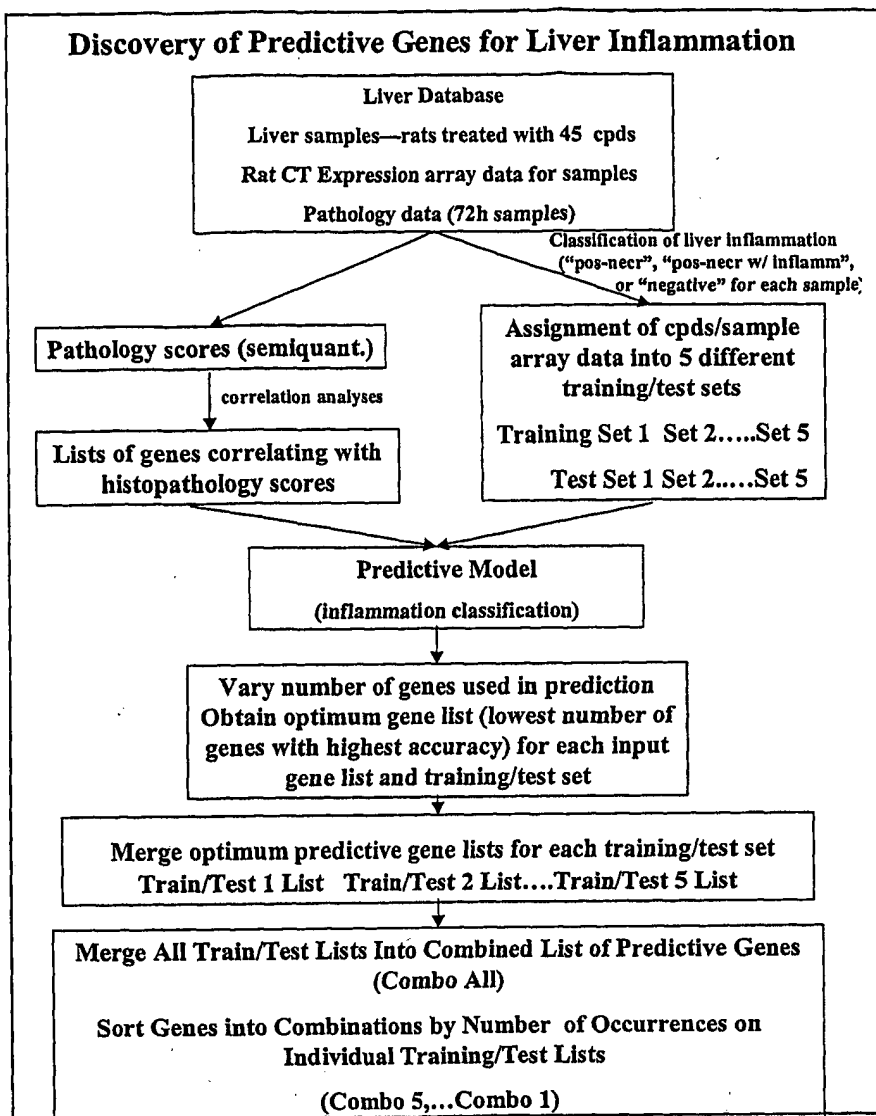


Figure 1

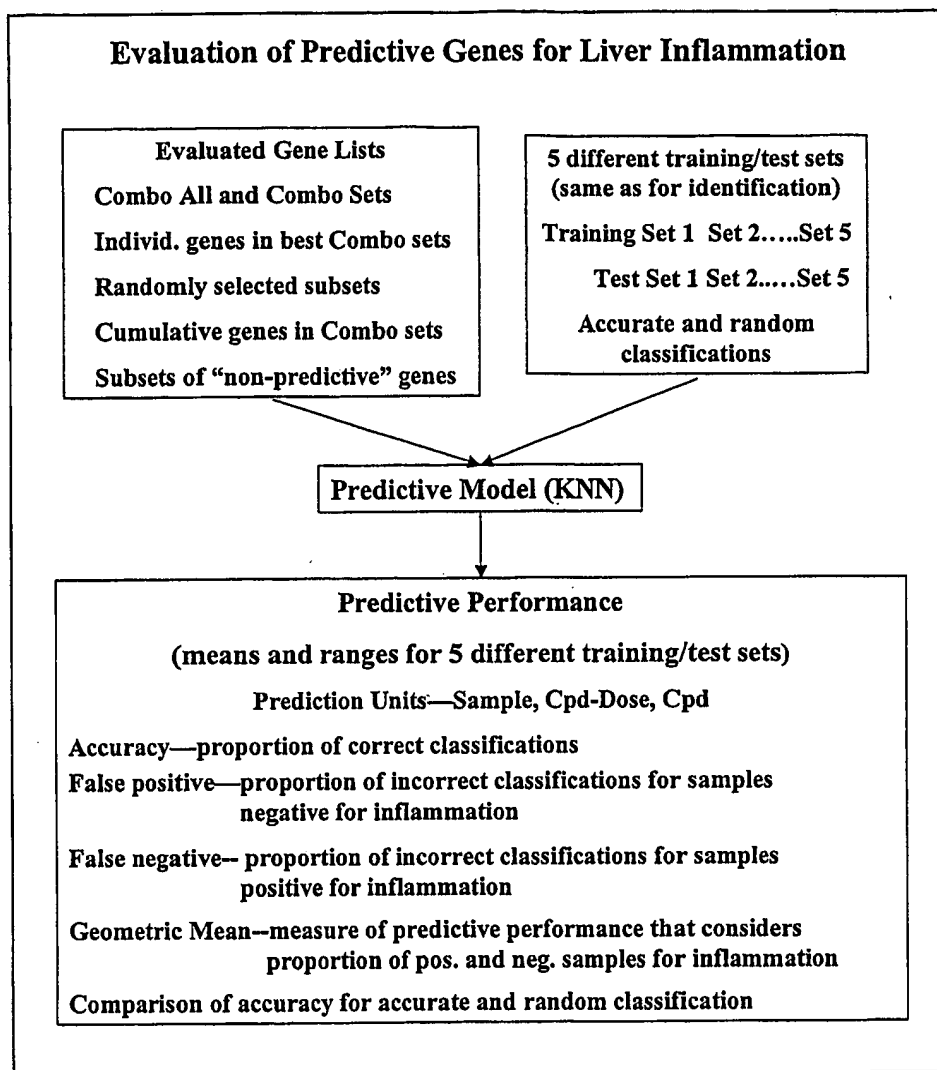
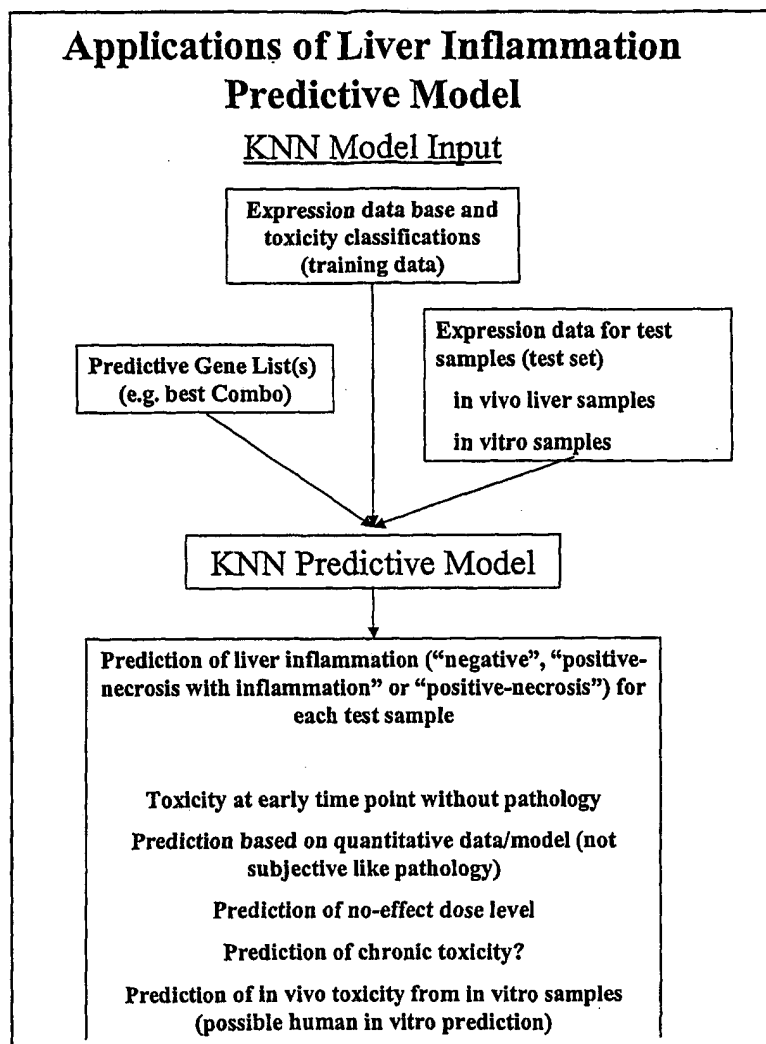


Figure 2

**Figure 3**

[illegible]

[illegible]

Table 26

[illegible]

Table 28

[illegible]

Table 26

[illegible]

Table 26

Carbonic anhydrase III	M22413	AB030829	X84349	L07738	J00710	U14647	U84410
Carbonic anhydrase III, sequence 2							
Carbonyl reductase							
Carminine palmitoyl-CoA transferase							
Caselin-alpha							
Caspase 1							
Caspase 3							

[illegible]

Table 28

[illegible]

Table 26

[illegible]

Table 26

Accession	Protein	Gene	Species	Length (aa)	Weight (kDa)	PI	Inst.	Source	Notes
D68924	Cyclin-dependent kinase 4 inhibitor p27kip1 (alternate clone)	CDKN2B	Human	262	28.5	5.2	EMBL	GenBank	
X18957	Cystatin C	CTSC	Human	104	11.5	5.2	EMBL	GenBank	
J05156	Cytochrome P450 11A1	CYP11A1	Human	498	54.5	5.2	EMBL	GenBank	
K03241	Cytochrome P450 1A2	CYP1A2	Human	498	54.5	5.2	EMBL	GenBank	
U33173	Cytochrome P450 2C11	CYP2C11	Human	498	54.5	5.2	EMBL	GenBank	
X55446	Cytochrome P450 2C23	CYP2C23	Human	498	54.5	5.2	EMBL	GenBank	
A4818043	Cytochrome P450 2C39 (alternate clone 2)	CYP2C39	Human	498	54.5	5.2	EMBL	GenBank	
U48220	Cytochrome P450 2018	CYP2018	Human	498	54.5	5.2	EMBL	GenBank	
M20131	Cytochrome P450 2E1	CYP2E1	Human	498	54.5	5.2	EMBL	GenBank	
X59559	Decorin	DCN	Human	326	35.0	5.2	EMBL	GenBank	
L33894	Deoxyxylidine kinase	DXK	Human	104	11.5	5.2	EMBL	GenBank	

Table 28

[illegible]

Table 28

[illegible]

Table 26

Table 26

[illegible]

Table 26

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Table 26

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Table 26

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Table 28

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Table 28

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Table 28

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Table 26

[illegible]

Table 28

[illegible]

Table 26

Phase-1 RCT-53	ATGACATGATTACGAATTAATACGACTCACTATAGGGAAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTTACTTTATGTATGTGAGTA CACTGTGTGATCTTTACACACACCAAGAAGAGCGGCATCCACTCCAGCCACAGCTGTTGTGAGGCCCAACAGAGTGTTGTGGGATTTGGAATCTCAG GACCTCTGGGAAGGCGAGTCAGTGTTCCTAACGCTTGAGCCATCCCTCCAGCCACAGCTTCTTTATGGAAGTGTCTTCACTCATTTGGTCTATGATTA CCCTTTGGGGGTTAAATGACCTTTCACATATCAATATCAATTAATCAATGAGCAGATATCCATTCGATGCAATCCGACAGCAGGCTCAAAATTA CAGTTAGGAAGTAGCAAAAGAAATTAATCTTACGGGTTGAAGGTCATACACACAGCAGCACTCTACTACAGAGGCTCTGGGTTCAGCAGAGGCTTGAA CCTGCTCTCATGGGGGGTTGCAGATCAGCGGGCTACACATGAGACTCATTTCTCAAGAAAGAAATAATGACAGGAAATATAAGCCTGACTG TGCCTCCACAGCTCTACCCAGCCTACCTACACACACGCAAGATCTGCTGTCTTCGAGAGAGAGTGTACTTCCCACATTCCTTTATGCTCTC NAAGTCATCCCTACNATNGGGCC TGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTCTCACAATTAATAGTGGGCTA TTGTTTCAGAAGAAGCTTCATCATTTGTGCAACTACACTAGCCCTAATTTATGTGACAGTCTCTTATGATGTGCAATTAATAGTATTAAGAA TACAGTTAAACACAGTTGAAATGATDOCATACATCCTACTCAGCTATATAGTGTCTATTAAGTGTGAGATTAATAGTATTAAGAA AAATAAGAGTTATGAGGAAAAAAGAAATATTTGGTGTGGCCATCTCTCATGTACGCTCTTATACAGAGTCTACCCCTACAGCTACGAGTGTG TAATGAGTTACAGCTCTACGCTGTATGTGTCTGTGTGTCAGACATCTGTTTGTTCACAGACAGTGTGATGATGAGAAATAAAGACTTAA ATTATAGAAAAAAGAAATTCGCGGCCCAAGCTTATCCCTTTAGTAGGGTAAATTTAGCTGTGCACTGGCCCTGCTTTTACACGCT CTGACTGGGAAAAAACCCTGGGCTTACCGCACTTAATGCGCTTGACGACATCCCTCTTCGCCAGCTGGGCTAATGACGGAANANGCCCGCACCGAT CCC TCTCTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGTTCCGGAATGACATTCGCTG CCAAATCAAGAAGCTGGGCTTCAGAGGCTTGAGCCATTCCTCACTGTCCAGGCCAGAGCTGGGACCCAAATGTTGTGTGAAGAGTAGAGTGT GCTGTGCCCTAGGTAGCAGAGAACAGAGGAGCAGTAGTGTGGCATCTCCACAGAGGCGAGCTGTGCTGAGTGTGAGGAGCTGGGCAAGCTTGTCTGG AACCCAGAGGTGCAAGTGCCCTCTGCTCCAGCTCTGCTGGGTCATCTCAGGCTCTGCTCAAGTGTCTTCAAGTGTCCCACTCTCTCCTGTT TGGGAAAAATCTCTTTTCCACTGTACATTTGACCCCAATGCAAGTACCAGCTAGCAGCTGCTGAGTGTCCCTGACACCTGTTCATTAAGAATCTCTCAACCTC GAGTGGAGGGTGGAAAGTGGGCGAGGTGAGCATCGGAAGTCTCAGCTCTGAGCTTTCAGTCTCCCTGACACCTGTTTCAATAAAGATCTGTGACACTC CTNTTTNGCNCNNNTTCCACNCCNNAAAAAANAANNNGTTGTGGCGCCCAAGCTTTCCCTTTAANGAGGGTTAATTTTACCTTGCCTCTG GCCGNCGTTTACACC TGAGGAGTGCAGNATGTTTATGAANCAGGTGGGTTCAAGGGGAAAGCTAAGCAGCTGAAGACTTCGAGTCTCACTTGCACCCTTCCACCCTCTC ACTCCCTTAAAGTAAACCCTCTCTCTCTCAAGGTCAGTGTCTGCTAGCTGTGACTGTGCTTGGGTTCAAGTGTGCAATGTGACAGTGAAGAAGTATTTTC CCAAACCCAGGAGAAAGTGGGTTGGGACTTTAGGTGACAGAGACCTGAGCATGACACAGAGAGCTGAGGAGGAGGCGCACTTGCACACTTTC GGGTTCCAGACAATCTCCCGAGAGCTCTGTCCCGAGGGGTGTGGTATGATGACACACTATCTCCCTCTCTCTGTTCTGTCTGCTTAACCTTAGGGCA CAGCACTCTACTCTTACACAACATGGGTCCTCAGCTTGTGGGCTGGACAGTGGGAGCCCATGGGCTCAGGCGCTGGAAAGCCCAAGCTCTCTGTAC TTGGCACAATGTCTTCGGGAAAC CCNNNTTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGCAAGTGTGCTGCTG GGGGCTGTAGAGAGCTCACAGCACTGACGAGCTGACTGTGCTTCCAGTTCGATCTGAGTGTGGGTTCTGGAAGCACTTGTGGGTTCTGAGAGCTTGTGGTCTG GCCCAACCCCAAGCCCTGTTTCTGTGACACCTGAGCTGTGACTGTGTTATCTTTAGCGCGGAGACATCTGTTTGGCTCTCTCTCTCTCTGCTC TCAGATTTGAACCTCCACGTTGGGGATCACACCTGCACTGTCCGAAATCTTCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT GATTAATAAAAAAAGAAAAAATTTGAAGCGCGGCGCAAGCTTATCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT ACACGCTGTGACTGGGAAACCTTGGCGGTACCCACTTANTCCCTTGCAGCACATCCCTCTTCCGAGAGTGGCGGCTTAATGAGGAGGCGG GCACGATCGCCCTTTCCCAANAATTGNCACCTGTGATGNCNAATGGGACCCGCCCTGTAAAGCCNNATTTAANGCCGCGG	
Phase-1 RCT-54	TCATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTCTCACAATTAATAGTGGGCTA TTGTTTCAGAAGAAGCTTCATCATTTGTGCAACTACACTAGCCCTAATTTATGTGACAGTCTCTTATGATGTGCAATTAATAGTATTAAGAA TACAGTTAAACACAGTTGAAATGATDOCATACATCCTACTCAGCTATATAGTGTCTATTAAGTGTGAGATTAATAGTATTAAGAA AAATAAGAGTTATGAGGAAAAAAGAAATATTTGGTGTGGCCATCTCTCATGTACGCTCTTATACAGAGTCTACCCCTACAGCTACGAGTGTG TAATGAGTTACAGCTCTACGCTGTATGTGTCTGTGTGTCAGACATCTGTTTGTTCACAGACAGTGTGATGATGAGAAATAAAGACTTAA ATTATAGAAAAAAGAAATTCGCGGCCCAAGCTTATCCCTTTAGTAGGGTAAATTTAGCTGTGCACTGGCCCTGCTTTTACACGCT CTGACTGGGAAAAAACCCTGGGCTTACCGCACTTAATGCGCTTGACGACATCCCTCTTCGCCAGCTGGGCTAATGACGGAANANGCCCGCACCGAT CCC TCTCTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGTTCCGGAATGACATTCGCTG CCAAATCAAGAAGCTGGGCTTCAGAGGCTTGAGCCATTCCTCACTGTCCAGGCCAGAGCTGGGACCCAAATGTTGTGTGAAGAGTAGAGTGT GCTGTGCCCTAGGTAGCAGAGAACAGAGGAGCAGTAGTGTGGCATCTCCACAGAGGCGAGCTGTGCTGAGTGTGAGGAGCTGGGCAAGCTTGTCTGG AACCCAGAGGTGCAAGTGCCCTCTGCTCCAGCTCTGCTGGGTCATCTCAGGCTCTGCTCAAGTGTCTTCAAGTGTCCCACTCTCTCCTGTT TGGGAAAAATCTCTTTTCCACTGTACATTTGACCCCAATGCAAGTACCAGCTAGCAGCTGCTGAGTGTCCCTGACACCTGTTCATTAAGAATCTCTCAACCTC GAGTGGAGGGTGGAAAGTGGGCGAGGTGAGCATCGGAAGTCTCAGCTCTGAGCTTTCAGTCTCCCTGACACCTGTTTCAATAAAGATCTGTGACACTC CTNTTTNGCNCNNNTTCCACNCCNNAAAAAANAANNNGTTGTGGCGCCCAAGCTTTCCCTTTAANGAGGGTTAATTTTACCTTGCCTCTG GCCGNCGTTTACACC TGAGGAGTGCAGNATGTTTATGAANCAGGTGGGTTCAAGGGGAAAGCTAAGCAGCTGAAGACTTCGAGTCTCACTTGCACCCTTCCACCCTCTC ACTCCCTTAAAGTAAACCCTCTCTCTCTCAAGGTCAGTGTCTGCTAGCTGTGACTGTGCTTGGGTTCAAGTGTGCAATGTGACAGTGAAGAAGTATTTTC CCAAACCCAGGAGAAAGTGGGTTGGGACTTTAGGTGACAGAGACCTGAGCATGACACAGAGAGCTGAGGAGGAGGCGCACTTGCACACTTTC GGGTTCCAGACAATCTCCCGAGAGCTCTGTCCCGAGGGGTGTGGTATGATGACACACTATCTCCCTCTCTCTGTTCTGTCTGCTTAACCTTAGGGCA CAGCACTCTACTCTTACACAACATGGGTCCTCAGCTTGTGGGCTGGACAGTGGGAGCCCATGGGCTCAGGCGCTGGAAAGCCCAAGCTCTCTGTAC TTGGCACAATGTCTTCGGGAAAC CCNNNTTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGCAAGTGTGCTGCTG GGGGCTGTAGAGAGCTCACAGCACTGACGAGCTGACTGTGCTTCCAGTTCGATCTGAGTGTGGGTTCTGGAAGCACTTGTGGGTTCTGAGAGCTTGTGGTCTG GCCCAACCCCAAGCCCTGTTTCTGTGACACCTGAGCTGTGACTGTGTTATCTTTAGCGCGGAGACATCTGTTTGGCTCTCTCTCTCTGCTC TCAGATTTGAACCTCCACGTTGGGGATCACACCTGCACTGTCCGAAATCTTCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT GATTAATAAAAAAAGAAAAAATTTGAAGCGCGGCGCAAGCTTATCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT ACACGCTGTGACTGGGAAACCTTGGCGGTACCCACTTANTCCCTTGCAGCACATCCCTCTTCCGAGAGTGGCGGCTTAATGAGGAGGCGG GCACGATCGCCCTTTCCCAANAATTGNCACCTGTGATGNCNAATGGGACCCGCCCTGTAAAGCCNNATTTAANGCCGCGG	
Phase-1 RCT-59	TCATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTCTCACAATTAATAGTGGGCTA TTGTTTCAGAAGAAGCTTCATCATTTGTGCAACTACACTAGCCCTAATTTATGTGACAGTCTCTTATGATGTGCAATTAATAGTATTAAGAA TACAGTTAAACACAGTTGAAATGATDOCATACATCCTACTCAGCTATATAGTGTCTATTAAGTGTGAGATTAATAGTATTAAGAA AAATAAGAGTTATGAGGAAAAAAGAAATATTTGGTGTGGCCATCTCTCATGTACGCTCTTATACAGAGTCTACCCCTACAGCTACGAGTGTG TAATGAGTTACAGCTCTACGCTGTATGTGTCTGTGTGTCAGACATCTGTTTGTTCACAGACAGTGTGATGATGAGAAATAAAGACTTAA ATTATAGAAAAAAGAAATTCGCGGCCCAAGCTTATCCCTTTAGTAGGGTAAATTTAGCTGTGCACTGGCCCTGCTTTTACACGCT CTGACTGGGAAAAAACCCTGGGCTTACCGCACTTAATGCGCTTGACGACATCCCTCTTCGCCAGCTGGGCTAATGACGGAANANGCCCGCACCGAT CCC TCTCTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGTTCCGGAATGACATTCGCTG CCAAATCAAGAAGCTGGGCTTCAGAGGCTTGAGCCATTCCTCACTGTCCAGGCCAGAGCTGGGACCCAAATGTTGTGTGAAGAGTAGAGTGT GCTGTGCCCTAGGTAGCAGAGAACAGAGGAGCAGTAGTGTGGCATCTCCACAGAGGCGAGCTGTGCTGAGTGTGAGGAGCTGGGCAAGCTTGTCTGG AACCCAGAGGTGCAAGTGCCCTCTGCTCCAGCTCTGCTGGGTCATCTCAGGCTCTGCTCAAGTGTCTTCAAGTGTCCCACTCTCTCCTGTT TGGGAAAAATCTCTTTTCCACTGTACATTTGACCCCAATGCAAGTACCAGCTAGCAGCTGCTGAGTGTCCCTGACACCTGTTCATTAAGAATCTCTCAACCTC GAGTGGAGGGTGGAAAGTGGGCGAGGTGAGCATCGGAAGTCTCAGCTCTGAGCTTTCAGTCTCCCTGACACCTGTTTCAATAAAGATCTGTGACACTC CTNTTTNGCNCNNNTTCCACNCCNNAAAAAANAANNNGTTGTGGCGCCCAAGCTTTCCCTTTAANGAGGGTTAATTTTACCTTGCCTCTG GCCGNCGTTTACACC TGAGGAGTGCAGNATGTTTATGAANCAGGTGGGTTCAAGGGGAAAGCTAAGCAGCTGAAGACTTCGAGTCTCACTTGCACCCTTCCACCCTCTC ACTCCCTTAAAGTAAACCCTCTCTCTCTCAAGGTCAGTGTCTGCTAGCTGTGACTGTGCTTGGGTTCAAGTGTGCAATGTGACAGTGAAGAAGTATTTTC CCAAACCCAGGAGAAAGTGGGTTGGGACTTTAGGTGACAGAGACCTGAGCATGACACAGAGAGCTGAGGAGGAGGCGCACTTGCACACTTTC GGGTTCCAGACAATCTCCCGAGAGCTCTGTCCCGAGGGGTGTGGTATGATGACACACTATCTCCCTCTCTCTGTTCTGTCTGCTTAACCTTAGGGCA CAGCACTCTACTCTTACACAACATGGGTCCTCAGCTTGTGGGCTGGACAGTGGGAGCCCATGGGCTCAGGCGCTGGAAAGCCCAAGCTCTCTGTAC TTGGCACAATGTCTTCGGGAAAC CCNNNTTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGCAAGTGTGCTGCTG GGGGCTGTAGAGAGCTCACAGCACTGACGAGCTGACTGTGCTTCCAGTTCGATCTGAGTGTGGGTTCTGGAAGCACTTGTGGGTTCTGAGAGCTTGTGGTCTG GCCCAACCCCAAGCCCTGTTTCTGTGACACCTGAGCTGTGACTGTGTTATCTTTAGCGCGGAGACATCTGTTTGGCTCTCTCTCTCTGCTC TCAGATTTGAACCTCCACGTTGGGGATCACACCTGCACTGTCCGAAATCTTCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT GATTAATAAAAAAAGAAAAAATTTGAAGCGCGGCGCAAGCTTATCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT ACACGCTGTGACTGGGAAACCTTGGCGGTACCCACTTANTCCCTTGCAGCACATCCCTCTTCCGAGAGTGGCGGCTTAATGAGGAGGCGG GCACGATCGCCCTTTCCCAANAATTGNCACCTGTGATGNCNAATGGGACCCGCCCTGTAAAGCCNNATTTAANGCCGCGG	
Phase-1 RCT-60	TCATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTCTCACAATTAATAGTGGGCTA TTGTTTCAGAAGAAGCTTCATCATTTGTGCAACTACACTAGCCCTAATTTATGTGACAGTCTCTTATGATGTGCAATTAATAGTATTAAGAA TACAGTTAAACACAGTTGAAATGATDOCATACATCCTACTCAGCTATATAGTGTCTATTAAGTGTGAGATTAATAGTATTAAGAA AAATAAGAGTTATGAGGAAAAAAGAAATATTTGGTGTGGCCATCTCTCATGTACGCTCTTATACAGAGTCTACCCCTACAGCTACGAGTGTG TAATGAGTTACAGCTCTACGCTGTATGTGTCTGTGTGTCAGACATCTGTTTGTTCACAGACAGTGTGATGATGAGAAATAAAGACTTAA ATTATAGAAAAAAGAAATTCGCGGCCCAAGCTTATCCCTTTAGTAGGGTAAATTTAGCTGTGCACTGGCCCTGCTTTTACACGCT CTGACTGGGAAAAAACCCTGGGCTTACCGCACTTAATGCGCTTGACGACATCCCTCTTCGCCAGCTGGGCTAATGACGGAANANGCCCGCACCGAT CCC TCTCTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGTTCCGGAATGACATTCGCTG CCAAATCAAGAAGCTGGGCTTCAGAGGCTTGAGCCATTCCTCACTGTCCAGGCCAGAGCTGGGACCCAAATGTTGTGTGAAGAGTAGAGTGT GCTGTGCCCTAGGTAGCAGAGAACAGAGGAGCAGTAGTGTGGCATCTCCACAGAGGCGAGCTGTGCTGAGTGTGAGGAGCTGGGCAAGCTTGTCTGG AACCCAGAGGTGCAAGTGCCCTCTGCTCCAGCTCTGCTGGGTCATCTCAGGCTCTGCTCAAGTGTCTTCAAGTGTCCCACTCTCTCCTGTT TGGGAAAAATCTCTTTTCCACTGTACATTTGACCCCAATGCAAGTACCAGCTAGCAGCTGCTGAGTGTCCCTGACACCTGTTCATTAAGAATCTCTCAACCTC GAGTGGAGGGTGGAAAGTGGGCGAGGTGAGCATCGGAAGTCTCAGCTCTGAGCTTTCAGTCTCCCTGACACCTGTTTCAATAAAGATCTGTGACACTC CTNTTTNGCNCNNNTTCCACNCCNNAAAAAANAANNNGTTGTGGCGCCCAAGCTTTCCCTTTAANGAGGGTTAATTTTACCTTGCCTCTG GCCGNCGTTTACACC TGAGGAGTGCAGNATGTTTATGAANCAGGTGGGTTCAAGGGGAAAGCTAAGCAGCTGAAGACTTCGAGTCTCACTTGCACCCTTCCACCCTCTC ACTCCCTTAAAGTAAACCCTCTCTCTCTCAAGGTCAGTGTCTGCTAGCTGTGACTGTGCTTGGGTTCAAGTGTGCAATGTGACAGTGAAGAAGTATTTTC CCAAACCCAGGAGAAAGTGGGTTGGGACTTTAGGTGACAGAGACCTGAGCATGACACAGAGAGCTGAGGAGGAGGCGCACTTGCACACTTTC GGGTTCCAGACAATCTCCCGAGAGCTCTGTCCCGAGGGGTGTGGTATGATGACACACTATCTCCCTCTCTCTGTTCTGTCTGCTTAACCTTAGGGCA CAGCACTCTACTCTTACACAACATGGGTCCTCAGCTTGTGGGCTGGACAGTGGGAGCCCATGGGCTCAGGCGCTGGAAAGCCCAAGCTCTCTGTAC TTGGCACAATGTCTTCGGGAAAC CCNNNTTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGCAAGTGTGCTGCTG GGGGCTGTAGAGAGCTCACAGCACTGACGAGCTGACTGTGCTTCCAGTTCGATCTGAGTGTGGGTTCTGGAAGCACTTGTGGGTTCTGAGAGCTTGTGGTCTG GCCCAACCCCAAGCCCTGTTTCTGTGACACCTGAGCTGTGACTGTGTTATCTTTAGCGCGGAGACATCTGTTTGGCTCTCTCTCTCTGCTC TCAGATTTGAACCTCCACGTTGGGGATCACACCTGCACTGTCCGAAATCTTCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT GATTAATAAAAAAAGAAAAAATTTGAAGCGCGGCGCAAGCTTATCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT ACACGCTGTGACTGGGAAACCTTGGCGGTACCCACTTANTCCCTTGCAGCACATCCCTCTTCCGAGAGTGGCGGCTTAATGAGGAGGCGG GCACGATCGCCCTTTCCCAANAATTGNCACCTGTGATGNCNAATGGGACCCGCCCTGTAAAGCCNNATTTAANGCCGCGG	
Phase-1 RCT-62	TCATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGATTTCTCACAATTAATAGTGGGCTA TTGTTTCAGAAGAAGCTTCATCATTTGTGCAACTACACTAGCCCTAATTTATGTGACAGTCTCTTATGATGTGCAATTAATAGTATTAAGAA TACAGTTAAACACAGTTGAAATGATDOCATACATCCTACTCAGCTATATAGTGTCTATTAAGTGTGAGATTAATAGTATTAAGAA AAATAAGAGTTATGAGGAAAAAAGAAATATTTGGTGTGGCCATCTCTCATGTACGCTCTTATACAGAGTCTACCCCTACAGCTACGAGTGTG TAATGAGTTACAGCTCTACGCTGTATGTGTCTGTGTGTCAGACATCTGTTTGTTCACAGACAGTGTGATGATGAGAAATAAAGACTTAA ATTATAGAAAAAAGAAATTCGCGGCCCAAGCTTATCCCTTTAGTAGGGTAAATTTAGCTGTGCACTGGCCCTGCTTTTACACGCT CTGACTGGGAAAAAACCCTGGGCTTACCGCACTTAATGCGCTTGACGACATCCCTCTTCGCCAGCTGGGCTAATGACGGAANANGCCCGCACCGAT CCC TCTCTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGTTCCGGAATGACATTCGCTG CCAAATCAAGAAGCTGGGCTTCAGAGGCTTGAGCCATTCCTCACTGTCCAGGCCAGAGCTGGGACCCAAATGTTGTGTGAAGAGTAGAGTGT GCTGTGCCCTAGGTAGCAGAGAACAGAGGAGCAGTAGTGTGGCATCTCCACAGAGGCGAGCTGTGCTGAGTGTGAGGAGCTGGGCAAGCTTGTCTGG AACCCAGAGGTGCAAGTGCCCTCTGCTCCAGCTCTGCTGGGTCATCTCAGGCTCTGCTCAAGTGTCTTCAAGTGTCCCACTCTCTCCTGTT TGGGAAAAATCTCTTTTCCACTGTACATTTGACCCCAATGCAAGTACCAGCTAGCAGCTGCTGAGTGTCCCTGACACCTGTTCATTAAGAATCTCTCAACCTC GAGTGGAGGGTGGAAAGTGGGCGAGGTGAGCATCGGAAGTCTCAGCTCTGAGCTTTCAGTCTCCCTGACACCTGTTTCAATAAAGATCTGTGACACTC CTNTTTNGCNCNNNTTCCACNCCNNAAAAAANAANNNGTTGTGGCGCCCAAGCTTTCCCTTTAANGAGGGTTAATTTTACCTTGCCTCTG GCCGNCGTTTACACC TGAGGAGTGCAGNATGTTTATGAANCAGGTGGGTTCAAGGGGAAAGCTAAGCAGCTGAAGACTTCGAGTCTCACTTGCACCCTTCCACCCTCTC ACTCCCTTAAAGTAAACCCTCTCTCTCTCAAGGTCAGTGTCTGCTAGCTGTGACTGTGCTTGGGTTCAAGTGTGCAATGTGACAGTGAAGAAGTATTTTC CCAAACCCAGGAGAAAGTGGGTTGGGACTTTAGGTGACAGAGACCTGAGCATGACACAGAGAGCTGAGGAGGAGGCGCACTTGCACACTTTC GGGTTCCAGACAATCTCCCGAGAGCTCTGTCCCGAGGGGTGTGGTATGATGACACACTATCTCCCTCTCTCTGTTCTGTCTGCTTAACCTTAGGGCA CAGCACTCTACTCTTACACAACATGGGTCCTCAGCTTGTGGGCTGGACAGTGGGAGCCCATGGGCTCAGGCGCTGGAAAGCCCAAGCTCTCTGTAC TTGGCACAATGTCTTCGGGAAAC CCNNNTTATGACATGATTACGAATTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCCAAGAATTCGGCACGAGGCAAGTGTGCTGCTG GGGGCTGTAGAGAGCTCACAGCACTGACGAGCTGACTGTGCTTCCAGTTCGATCTGAGTGTGGGTTCTGGAAGCACTTGTGGGTTCTGAGAGCTTGTGGTCTG GCCCAACCCCAAGCCCTGTTTCTGTGACACCTGAGCTGTGACTGTGTTATCTTTAGCGCGGAGACATCTGTTTGGCTCTCTCTCTCTGCTC TCAGATTTGAACCTCCACGTTGGGGATCACACCTGCACTGTCCGAAATCTTCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT GATTAATAAAAAAAGAAAAAATTTGAAGCGCGGCGCAAGCTTATCCCTTTAGTAGGGGTTAATTTTACTTGGCACTGGCGCCGCTTTT ACACGCTGTGACTGGGAAACCTTGGCGGTACCCACTTANTCCCTTGCAGCACATCCCTCTTCCGAGAGTGGCGGCTTAATGAGGAGGCGG GCACGATCGCCCTTTCCCAANAATTGNCACCTGTGATGNCNAATGGGACCCGCCCTGTAAAGCCNNATTTAANGCCGCGG	

[illegible]

Table 28

[illegible]

Table 26

[illegible]

Table 26

[illegible]

Table 26

[illegible]

[illegible]

Table 2a

[illegible]

[illegible]

Table 26

[illegible]

[illegible]

Table 26

Tissue plasminogen activator	A4924878	TTTCNCNCNCTAAAGAGGAAANNNNGCCGCGNCCCNNTTGAATTTAGGNTCACTTTTAAAGTGTGAAAANNCNTTGGAAATTT ATTATTTCAGTACAGCAATAATNCAGATTTTATACAGCACTAAAGATATAGATTTCAATATATATATATAGTGTGATTTTCAATATATTAAT CATACAGTTCTCCAGCATCTGGAAAGTTTATAAGAAAGAAAGCACTACATCTGCAAGAGGATATGCCCCAGAGTGTGAGTGTGGGAGAT GGGAAATATTGATTTCAAGGGTTTAGGGGCTGTGGTCTGATCAGCTTAACCCCTTCTCTCTTGAGGCGCATGCTGTGGCCCTGTGTGAACATATA GAAACACATTTCTGCTCTCAGTACAGACTTTTACTCTCTGATGAAAGATCAAGTCTGTTTCACTGTGAGACAGATCTTGTGTGTTCAAGATAGT GGTCCAGGAAAGGGTGGACTTTGGTCTTACTTCTCTTTTAAATCTTTAGAGTTATAGGAAGTTGGACCTCTGTGGCGAATCTTGGCCCTCGAGGGCC AAATCCCTTAGTGGTGGTAAATTAATTTGGTAAATGATGTCATANNNNNN CNCANNN NAAAAAANN GGTTTGAAGTGTGTTATGATGTTTCCACAGTAACTCAAAAGCTTTAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT CCCTTGTCCACTCCAGGCTGTAGGTAAGGGAGGCTTGGACAGATTAAGTGTGATGTTTACTGTGTGATGTTTACTGTGTGATGTTTACTGTGT CGTTTCAACACACAGATACCTGTGTGGCGAATCTTGGCCCTCGAGGGCCAAATTCCTTATAGTGAATTAATTAATTAATTAATTAATTAATTAAT TAGGTGNCATATAGATCTAAGCTATGATCAAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCT GGGGGATCTCCAAAGTGTCTCTGATGTCGATCAAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCTTGTACAGCT GCACAGGAGGCTGGAGGCTTGTCTCTGGGAGAGCCGCGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCT GTACAGGTAAGACTGGACCACTAAGTGTGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCTTGGAGGCT AC TCATTACAGGTTAAGAGAGGCTCAGAGCTTAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGTAAAGAGT GGCCTAAAGGGCGAATTCACAGCACACTTGGCGCGCTTACTAGTGGATGCGAGCTGGCNCACAGCTTGGATGATGATGATGATGATGATGATGATGAT CCTTAATAGCTTTGGCGTAACTATGNNCA NCTCAAGTATGATCAAGTNGTACCGAGCTGGGATCCACTAGTACCGCGCCAGCTGTGCTGGAATTCGCGCTTATCGCGCTTATCGCGCTTATCGCGCT AGGAGTCTGTGAGAGCTACCTACCTGTCTGTGAG CAAGGAGGCTTGGAGTGGAG TTCTCTTCCCGGAGTTTCAACGAG CACTTCTCTTATCTGAGGAGTATCAGGAG TGGCTCTCCAGGAG GANCTTGGCCAAAGGGCGAATTCGAGATATCCAT TTGNGAATGGGCGCTCTAGAT CGGGATTTCAAGGAGTTCAGAG CAGAAAGGAG GTTTCATCCAAATGTTGATGAG TTAGTCTCTGTTGATGAG TTGCGCCATGTTGAG CAGCAGCTGTTGAG ANN GCCAAGATGGAAGATTTTTCAGAGCTTGGAG GGCCAAATGCAATTCATGGGCGCTTGGCCAGATTCACAAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG GTCTACAGTGGCTTCCCGAGATGAGCTTGTGATCCTGATCCAAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG TCATGGAATCCCTATGTTGGATTCCTATGTTGGAGAG GGCAATGTTCAAGGAG ACCAACCTATGAG
Transitional endoplasmic reticulum ATPase	A058675	
Transferrin	X14878	
Tryptophan hydroxylase	X53501	
Tyrosine aminotransferase	M18340	
Ubiquitin conjugating enzyme (RAD 6 homologue)	M62388	
UDP-glucuronosyltransferase	Y00156	

Table 26

[illegible]

Table 26

[illegible]

Table 28

[illegible]

Phase-1 RCT-32	0.8927694	0.9313205	1.0993105	0.83324613	0.5851747	0.9388547	0.8118648	0.8702248	0.8918419	1.3261445	1.2512845	0.71845216	2.0377539	1.40487
Peroxisome assembly factor 1	0.9167207	1.0454909	1.0889206	0.94538796	0.88189805	0.83104867	0.8118648	0.8702248	0.8918419	1.3261445	1.2512845	0.71845216	2.0377539	1.40487
8-oxododecane fatty acid glyoxylase	0.9915396	0.9938749	0.9517287	0.9802425	0.9749627	0.9347489	0.96911025	1.0160067	0.9677689	1.0602769	1.1446698	1.1321105	0.937768	0.9088885
Phase-1 RCT-82	1.01155	1.0713702	0.9870728	0.97310034	0.98300435	0.7689255	0.8286165	1.0160067	0.9677689	1.0602769	1.1446698	1.1321105	0.937768	0.9088885
Matrin F/G	0.9677335	1.0312579	0.9432991	1.0679039	1.069491	0.8953634	1.1674296	0.8953634	0.9050362	0.9050362	0.9050362	0.9050362	0.9050362	0.9050362
Phase-1 RCT-184	1.035241	1.8852695	0.9432991	1.0679039	1.069491	0.8953634	1.1674296	0.8953634	0.9050362	0.9050362	0.9050362	0.9050362	0.9050362	0.9050362
Phase-1 RCT-168	1.1201595	1.111117	1.159044	1.0353439	1.0026337	0.8913441	1.0027814	0.8916419	0.8953634	0.9050362	0.9050362	0.9050362	0.9050362	0.9050362
Carbonic anhydrase II	0.7795052	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593
Triphosphatase	0.9549554	0.9297435	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593
Phase-1 RCT-179	0.95238325	1.032324	1.1339133	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593
Carbonic anhydrase III	0.9226636	0.8378593	1.0390575	0.8178785	1.074997	1.248997	1.5738437	0.9512283	0.9512283	0.9512283	0.9512283	0.9512283	0.9512283	0.9512283
Phase-1 RCT-161	0.95238325	1.032324	1.1339133	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593	0.9253593
Phase-1 RCT-207	0.9653132	0.9371596	1.076025	0.883513	0.96043543	0.95431008	0.94571644	0.94571644	0.94571644	0.94571644	0.94571644	0.94571644	0.94571644	0.94571644
Phase-1 RCT-144	0.9657768	0.8592057	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446	0.78999446
Phase-1 RCT-225	1.26674	1.353622	1.2765595	0.784895	0.8136099	0.7925297	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726
Cytochrome P450 2E1	1.2276817	1.26674	1.353622	1.2765595	0.784895	0.8136099	0.7925297	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726	0.9480726
Thioredoxin-1 (Trx1)	0.7817285	0.748733	0.9408048	0.8722432	0.95570135	0.91150415	0.7671516	0.9110784	0.93018097	0.93018097	0.93018097	0.93018097	0.93018097	0.93018097
Carbonic anhydrase III	0.4945099	0.748733	0.9408048	0.8722432	0.95570135	0.91150415	0.7671516	0.9110784	0.93018097	0.93018097	0.93018097	0.93018097	0.93018097	0.93018097
Phase-1 RCT-140	1.1334783	1.107094	1.073868	1.0335998	1.0802525	0.9842451	1.1391551	1.0527678	1.0350044	1.1150055	1.117007	1.26574	1.1897883	1.2030088
Complement component C3	0.6570244	0.8205974	0.7690885	0.9257766	1.0361859	0.8535911	0.8535911	0.8535911	0.8535911	0.8535911	0.8535911	0.8535911	0.8535911	0.8535911
Glucuronidase	0.9828889	0.9807146	0.8488332	0.8597957	1.0448236	1.5471694	0.8257574	0.8257574	0.8257574	0.8257574	0.8257574	0.8257574	0.8257574	0.8257574
Phase-1 RCT-173	1.8717891	1.401224	1.1062146	1.0103557	0.9580486	0.9494038	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
3-methylcrotonyl-CoA carboxylase	1.190752	1.099463	0.9722004	1.0213909	0.9975484	1.2019539	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Perforin multimeric enzyme type II	0.8556373	0.8731284	1.0771408	1.1467946	1.0778381	1.2019539	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Phase-1 RCT-40	0.8289238	0.8246514	0.96134084	0.8732337	1.168917	1.055092	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873
Senescence marker protein-30	0.9651517	0.83318748	1.2714697	0.9008456	1.0748038	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873	0.97821873
Cytin G	0.961405	1.0574917	1.0137657	1.1366633	0.8162779	0.7222134	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Midline-associated antigen ME-491	0.96715975	0.98702213	0.8622038	0.8581203	0.9337167	0.7222134	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Phase-1 RCT-28	1.0191764	0.7059432	1.0162038	0.8581203	0.9337167	0.7222134	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Alcohol dehydrogenase 1	0.9225982	0.8545938	1.1513512	1.0945563	1.137605	1.0230088	1.008137	0.9710284	0.96284304	0.84703344	0.8622332	0.8593834	0.85280116	0.8371701
Stem cell factor	0.7783768	0.8545938	1.1513512	1.0945563	1.137605	1.0230088	1.008137	0.9710284	0.96284304	0.84703344	0.8622332	0.8593834	0.85280116	0.8371701
JNK1 stress activated protein kinase	0.9590949	0.9161793	0.800597	1.0162038	0.8581203	0.9337167	0.7222134	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827	1.0454827
Phase-1 RCT-55	1.1594281	0.933164	1.112452	1.0631553	1.0437088	0.96284304	0.84703344	0.8622332	0.8593834	0.85280116	0.8371701	0.8371701	0.8371701	0.8371701
Uniquitin conjugating enzyme (RAD 8 homologue)	0.80546576	0.92918254	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191	0.94949191
DNA topoisomerase I	1.191639	1.185165	1.158542	1.0441002	1.0701905	1.0422582	0.9522511	0.9522511	0.9522511	0.9522511	0.9522511	0.9522511	0.9522511	0.9522511
Superoxide dismutase Mn	0.952213	1.097276	1.7881792	0.9839663	1.1028981	1.1596872	1.0428436	1.0428436	1.0428436	1.0428436	1.0428436	1.0428436	1.0428436	1.0428436
Beta-tubulin, class I	1.0698533	1.0424213	0.9838826	1.076499	1.0078063	0.9198608	0.993936	0.993936	0.993936	0.993936	0.993936	0.993936	0.993936	0.993936
Carbamoyl phosphate synthetase I	0.7327411	0.8664816	0.8959347	1.0486505	1.1763115	0.81447345	0.75746655	0.75746655	0.75746655	0.75746655	0.75746655	0.75746655	0.75746655	0.75746655
Phase-1 RCT-141	1.2509897	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997	1.2518997
DNA topoisomerase II	1.4271842	0.8592211	1.1276556	0.752805	0.736201	0.91449884	1.0831653	0.9336473	0.9336473	0.9336473	0.9336473	0.9336473	0.9336473	0.9336473
Gamma-actin, cytoplasmic	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136	0.8147136
Ribosomal protein L13A	1.1165713	1.046511	0.9725555	0.8907745	0.9913541	0.83540523	1.0308557	0.9555017	0.9555017	0.9555017	0.9555017	0.9555017	0.9555017	0.9555017
IkB-α	1.3233488	1.289784	1.3219572	1.3819382	1.425153	1.036206	1.3208362	1.0886663	1.20215	1.1361764	1.1723542	1.1812063	1.3416359	3.4796095
Phase-1 RCT-65	1.1578233	1.2894429	1.376532	1.0682418	1.1722058	1.1112821	1.377724	1.478137	1.6327719	1.723542	1.1812063	1.3416359	3.4796095	3.4796095
Cytin	1.1774017	1.3448673	1.0215157	1.215086	1.153043	0.9717065	1.169323	1.132439	1.205841	1.239121	1.081191	1.335424	3.4295046	4.020015
Protein O-mannosyltransferase 1 (Pom1)	1.7207144	1.6997445	1.2101685	1.4746039	1.181922	1.0714784	1.345044	0.9475953	1.182433	1.4086727	0.9116784	1.273309	1.7972816	1.8118903
HMG CoA reductase	1.0254318	1.1514983	1.197895	1.0065943	1.098713	1.055345	0.9406101	1.1927403	1.1655643	1.1849275	1.1275822	1.3160306	1.365736	1.365736
Phase-1 RCT-12	0.6898839	0.77552754	0.75407894	0.8944311	1.0828478	1.0075502	0.67617315	1.2359542	1.0848296	0.93313855	1.0134275	0.8854412	3.0685628	4.0293376
Interferon related developmental regulator (FRD1 (PC4))	0.9034025	1.0879289	1.0957382	0.7396188	0.6387257	0.7163885	0.67617315	1.2359542	1.0848296	0.93313855	1.0134275	0.8854412	3.0685628	4.0293376
Glucose-regulated protein 78	1.0688891	1.0014078	0.9632836	1.0936232	1.0432448	1.0601585	1.0656419	0.8712314	0.7653701	0.7653701	0.7653701	0.7653701	0.7653701	0.7653701
3-oxo-hydroxyacid dehydrogenase (HSD3B1)	0.81447136	0.8695206	0.8474238	1.0391469	1.007894	0.8921997	0.8858986	1.0159861	1.0174546	1.0174546	1.0174546	1.0174546	1.0174546	1.0174546
Caspase 6	0.9582353	0.880693	0.885682	1.051162	1.1468936	0.9476765	1.1769031	1.1769031	1.1769031	1.1769031	1.1769031	1.1769031	1.1769031	1.1769031
Phase-1 RCT-169	0.9465599	0.8464824	0.8322466	1.1923697	1.0633507	0.8125094	1.0715419	1.0715419	1.0715419	1.0715419	1.0715419	1.0715419	1.0715419	1.0715419
Phase-1 RCT-197	1.4684594	1.104215	1.33316	1.79813775	0.89131916	1.1544548	1.02713096	0.65181425	0.90614754	1.2220098	1.0768808	1.3125105	1.843493	1.9507734

Phase-1 RCT-72	0.9564911	0.88003176	0.9346035	1.1585289	0.9473144	0.9802654	0.9887746	1.029165	1.022861	1.075238	1.2492676	1.290932	1.055958	1.067305
Pyruvate kinase, muscle	0.95350647	0.8536559	0.87535524	1.0531774	1.0575631	0.8971153	0.86542205	1.2156251	1.1187308	1.182268	1.2496331	1.290932	1.055958	1.067305
Phase-1 RCT-286	0.8430953	0.8541612	0.8918854	0.8418201	1.0496066	1.234345	0.8012554	0.9859324	0.8817054	0.7301263	1.20156	1.2496331	1.055958	1.067305
Phase-1 RCT-40	1.032489	0.9757494	0.9817548	1.1826106	0.94522634	0.8943565	0.9760976	0.9664504	1.3790021	1.1146451	1.220156	1.2496331	1.055958	1.067305
Cytochrome P450 2C39 (alternate clone 2)	0.8632141	0.88070946	0.9388766	0.8739504	1.074224	0.5245487	0.7435515	0.88533728	0.94950628	0.9193067	0.9712307	0.9900573	1.055958	1.067305
Phase-1 RCT-290	1.2162371	1.0715904	0.9494156	0.8810034	1.104331	1.08223394	1.2100304	1.0216184	0.74196628	1.0489162	1.0242787	0.9900573	1.055958	1.067305
Phase-1 RCT-261	1.2551268	1.263715	1.250336	1.303821	1.403033	1.1883374	1.2833997	1.224129	0.8994404	1.1610305	1.0786904	1.0886605	1.153441	1.1776813
Methylcrocylo-A racemase alpha	0.82110494	1.2034776	1.003317	0.7870523	1.1660686	1.1233436	0.971532	0.8994404	0.8954433	0.8652615	0.8651606	0.7996629	0.8415165	0.8529073
Cytochrome P450 1A2	3.1270152	3.549854	2.653247	2.453704	0.902285	0.8784901	2.1181553	0.9632044	0.9356525	0.8992704	1.3179884	1.295724	1.3613801	1.3613801
Phase-1 RCT-287	1.422868	1.047433	1.0559302	0.8028473	1.1806003	0.7937513	0.82433254	0.8742385	0.832821	0.7315593	1.137778	1.255162	1.5468844	1.5611894
Monomelic acidase B	0.8353145	0.9735675	1.1973369	0.9083767	1.1355702	1.0404954	1.081609	0.819362	0.7041531	0.82433254	0.8742385	0.7315593	1.137778	1.255162
Phase-1 RCT-264	0.9240714	0.8528097	0.9166532	1.1634672	1.0719354	0.9754638	0.9791548	0.9791548	0.9791548	0.9791548	0.9791548	0.9791548	0.9791548	0.9791548
Paraoxonase (membrane associated)	0.8521559	0.8642794	0.9491004	0.92459774	1.0095012	1.015138	0.8466162	0.8538944	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546
Phase-1 RCT-143	0.9520625	1.0175584	1.152831	0.91687896	0.9460465	1.0576558	1.0576558	1.0576558	1.0576558	1.0576558	1.0576558	1.0576558	1.0576558	1.0576558
Phase-1 RCT-117	1.1833967	1.1688137	1.0456405	0.8834435	1.1557834	0.9740453	0.9740453	0.9740453	0.9740453	0.9740453	0.9740453	0.9740453	0.9740453	0.9740453
Glutathione S-transferase (delta-1)	0.86374315	0.8856804	1.2106823	0.8632941	0.8726834	0.93415713	0.97860014	0.8757727	0.8377561	0.8552892	0.95975057	1.0275719	1.077214	1.077214
Phase-1 RCT-91	0.9737173	0.95016503	0.99763905	0.8632941	0.8726834	0.93415713	0.97860014	0.8757727	0.8377561	0.8552892	0.95975057	1.0275719	1.077214	1.077214
Phase-1 RCT-142	1.1960444	0.9801294	1.0369414	0.84625786	0.8874333	1.0828891	1.0196325	0.9259733	0.8538944	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546
Phase-1 RCT-148	0.9405753	0.9305653	1.027058	0.8719438	0.9480513	0.9912571	0.9259733	0.8538944	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546
Adiponectin receptor type II	1.1541842	1.2685903	1.1716727	1.055364	0.916239	0.8717396	1.015417	0.9259733	0.8538944	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546
Cytidine methyltransferase	1.0608668	1.5078229	0.8007792	1.2737304	1.1888972	1.015417	0.9259733	0.8538944	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546	0.7931546
Phase-1 RCT-281	1.071095	1.1165307	1.1198	0.97465324	1.083032	1.020507	1.08597	1.08597	1.08597	1.08597	1.08597	1.08597	1.08597	1.08597
Ciliary neurotrophic factor	1.0169834	1.025687	1.0394446	0.9709871	1.0406653	0.918625	0.918625	0.918625	0.918625	0.918625	0.918625	0.918625	0.918625	0.918625
Gap junction membrane channel protein beta 1 (Gp11)	1.3278137	1.4830731	1.0371231	1.2505974	1.0479804	1.0509363	1.3095423	0.8641917	1.0387015	1.1243376	1.388952	1.4917842	1.2714668	1.6413171
Phase-1 RCT-95	1.0653734	1.0943666	1.0920255	1.0052731	0.9834284	0.9198005	0.8843174	1.0747685	0.9705804	1.1603475	1.2018855	1.254912	1.119182	1.0540007
Phase-1 RCT-287	0.86518196	0.829776	1.0057417	1.0144409	1.0905442	1.106405	0.8730718	1.0591137	0.8243395	0.7745483	0.8412284	0.7803776	0.7618155	0.6975374
Retinol-binding protein (RBP)	0.8276005	0.9455761	0.8568591	1.0555151	1.0334053	1.3062078	0.8627825	0.8176987	0.8176987	0.8176987	0.8176987	0.8176987	0.8176987	0.8176987
Very long-chain acyl-CoA synthetase	0.80009559	0.9559094	0.83707675	0.967678	0.9089791	1.1374109	0.78930095	0.8613012	0.717781	0.8641532	0.7183845	0.8026149	0.7136677	0.6049239
Syndecan-1	0.936307	1.0044895	1.045094	0.7803195	0.8943745	0.8770514	0.96620095	0.8871013	0.866011	0.932807	0.8074743	0.56020135	0.64669134	0.7052087
Shafin	0.9388723	1.0049616	1.0451889	1.0311984	0.98211097	0.96670246	0.8661629	0.8891083	0.8891083	0.8891083	0.8891083	0.8891083	0.8891083	0.8891083
Phase-1 RCT-145	1.003721	0.9760526	1.054964	0.8625271	0.9147126	0.9353438	0.86883373	0.86883373	0.86883373	0.86883373	0.86883373	0.86883373	0.86883373	0.86883373
Adin	1.0847144	0.9289211	0.98411864	0.8694424	0.9841384	1.0350421	0.83007076	0.716835	0.9237353	0.7762529	0.8748824	0.8801687	0.8801687	0.8801687
Phase-1 RCT-89	0.7385505	0.7308294	0.7659976	1.0051536	0.8858995	1.0038606	0.7356453	0.8549313	0.90020853	1.137184	1.123485	1.1063212	1.1310183	0.9517316
Sarcoplasmic reticulum calcium ATPase	0.9546683	0.7933568	0.83231658	0.8008275	0.8834463	0.96812847	1.1263669	0.8698157	0.8698157	0.8698157	0.8698157	0.8698157	0.8698157	0.8698157
Alpha-2-macroglobulin, sequence 2	0.93290405	0.9565557	0.9401908	1.0095808	1.0505844	1.0294287	0.9523745	0.9700533	1.0281835	1.0282618	1.0648814	1.1127656	1.3019638	1.3601345
Phase-1 RCT-204	1.2493769	1.1581841	1.1126227	0.98258734	0.9648066	0.91881943	1.1684376	0.9113587	0.95687427	1.1636794	1.0524487	1.3334199	2.2401886	2.888347
Vascular endothelial growth factor	1.0143814	1.0535113	1.3957062	0.8221084	1.108023	1.0472747	0.91196984	0.85798286	0.88008765	0.81534255	0.83454865	0.74846556	0.613383	0.5675148
NADP-dependent isocitrate dehydrogenase, cytosolic	1.0428979	0.6692255	1.0131096	0.9066133	0.9446955	0.9643496	1.002769	0.8851281	0.757579	1.039748	1.186306	1.0657325	1.1368392	1.0442419
DNA binding protein inhibitor I02	1.5458865	0.85021937	1.2858434	1.0025565	0.8234438	1.3533235	1.190515	0.5884077	0.88552815	0.5332409	1.3324105	1.0421505	0.4901073	0.406707
Glutathione S-transferase Ya	1.4003818	1.714145	1.500072	1.000429	0.88695186	0.7154571	1.1960803	0.4197728	0.8165053	1.003339	1.0378283	0.6125635	1.0139183	1.0915428
Espoxide hydrolase	0.55202204	0.7285985	1.2846191	0.71380146	1.1148312	0.8254892	0.5012536	0.6957085	0.9467208	0.817055	0.5800014	0.59738594	0.7261026	0.65688576
Insulin-like growth factor I	0.6756555	0.7932772	0.9251054	1.3019831	1.1805605	1.2579488	0.9393485	1.697178	0.8460915	1.3785894	1.175704	0.8812183	1.5185218	1.2930218
Proteinase H synthase	1.2651115	1.1318145	1.130187	0.933725	0.8138184	0.8935485	1.0375621	1.1725663	0.8362243	0.8959725	0.8881493	0.583582	0.7515894	0.49373077
Phase-1 RCT-136	0.79842913	0.8227001	1.0380038	0.9072248	1.1245294	1.225125	1.000511	0.8694641	0.85171237	0.767167	0.8446415	0.7245472	0.6457857	0.6361887
Phase-1 RCT-137	0.9168729	0.8693415	0.9723332	0.8072248	1.1245294	1.225125	1.000511	0.8694641	0.85171237	0.767167	0.8446415	0.7245472	0.6457857	0.6361887
Phase-1 RCT-138	1.0783955	1.290711	1.2458915	0.74528153	0.9283177	0.86275904	0.9163274	0.5429132	0.68007	1.0042231	0.74804384	0.7371472	0.7888191	0.90231526
Hepatic lipase	1.1316844	1.231427	1.1796055	0.9646134	1.0430844	1.0627485	1.024271	0.8246276	1.0538137	1.071265	0.81609187	0.85251546	0.75562195	0.85226268
Phase-1 RCT-164	0.80407816	1.0072122	0.9524981	1.120242	1.1020119	1.2142371	1.000427	0.7641066	1.0538137	1.071265	0.81609187	0.85251546	0.75562195	0.85226268
Acyl-CoA dehydrogenase, medium chain	1.1807784	1.2652018	1.4164796	1.0371221	1.1144875	1.3037002	1.000427	0.7641066	1.0538137	1.071265	0.81609187	0.85251546	0.75562195	0.85226268
Glutathione S-transferase Yb2 subunit	1.1522654	1.1488292	1.1304657	1.031471	0.9545174	1.0033445	0.89327186	0.90061215	0.8823468	1.1381835	1.0730559	1.0347549	1.525749	1.0763708
Carbonic dehydratase	0.7639725	0.83002496	0.862535	0.9391288	1.304399	1.004411	1.011132	0.8808609	0.8363542	0.8957379	0.82318504	0.7215322	0.7864073	1.0301318
Phase-1 RCT-168	0.8742619	0.9168823	0.862535	0.9391288	1.304399	1.004411	1.011132	0.8808609	0.8363542	0.8957379	0.82318504	0.7215322	0.7864073	1.0301318
Apolipoprotein E	0.8425634	0.8004274	0.93197507	0.8202995	1.004411	1.011132	0.8808609	0.8363542	0.8957379	0.82318504	0.7215322	0.7864073	1.0301318	1.0301318
UDP-glucanase/transferase	1.2114421	1.2207865	1.3743871	0.8069741	0.8900951	0.8618778	1.13022	0.8959725	0.4644465	0.8262522	0.8513544	0.7058897	0.9159562	1.0630418
UDP-glucanase/transferase	0.8425634	0.8004274	0.93197507	0.8202995	1.004411	1.011132	0.8808609	0.8363542	0.8957379	0.82318504	0.7215322	0.7864073	1.0301318	1.0301318
Glutathione S-transferase P1	0.9735552	0.9936215	1.1789943	0.86482483	0.7969346	0.66934717	0.9072232	0.8343068	0.86551015	0.2063515	0.8259395	0.8563681	0.8122402	0.89838613
Disulfide isomerase related protein (ERG2)	0.9486957	1.1137682	1.0332832	0.8366091	1.150063	1.1043978	0.9042298	0.8862655	1.0750332	0.8134023	0.8775612	0.9140326	0.590182	0.87215976
Ribosomal protein L13	0.6645647	0.8010336	0.9668674											

Phase-1 RCT-13	1.0014223	0.9760163	0.9975413	1.0063237	0.9598741	0.9495076	1.0765151	0.95638615	1.0768986	1.085428	1.0432041	1.0488872	1.0533985
Strain beta (Fetib)	0.8387632	1.1367823	0.8904843	1.5560211	1.0567841	1.0979436	1.0837438	0.9377691	0.8533187	0.903381	0.8208613	0.7842998	1.052421
3-Hydroxybutyrate dehydrogenase	0.9350311	0.896864	0.8416035	1.1010541	1.1637712	0.8636274	0.8536274	0.95630526	0.9485724	0.8753564	0.7591763	0.8670518	0.8670518
Carbonic anhydrase III, sequence 2	0.6550076	1.0276418	0.6877825	1.2548918	0.9143923	1.440601	0.9675178	0.8718083	0.7346263	1.0716652	0.6079237	0.5503115	0.7911517
Phase-1 RCT-10	0.9536274	1.0270253	1.0144812	1.0028653	1.0781436	1.364047	0.8520371	1.0037611	0.816404	0.9563308	0.82288856	0.82933326	0.8915715
Alpha-2-microglobulin	0.5414904	1.0234103	0.8643646	1.0000803	0.9685138	1.5398822	0.95688627	1.007162	0.8502659	0.8614137	0.7001814	0.6964314	0.8318034
Phase-1 RCT-11	0.9495588	0.9167283	0.9518365	0.98472935	1.033047	1.2381826	0.9698672	0.9051143	0.8642997	0.8623236	0.9093305	0.7835047	0.8618813
Phase-1 RCT-252	0.7465498	0.7393094	0.8080187	1.033047	0.9767229	1.3343353	0.8176429	0.9022007	0.86793636	1.1568792	0.90585146	1.088007	0.8627615
Phase-1 RCT-25	0.9457137	0.846988	0.9855887	0.8357446	1.1565091	1.2452666	1.1677488	0.7451959	0.8682891	0.8804926	0.9687114	1.0532428	0.8226156
Phase-1 RCT-278	0.935143	1.0346907	0.9855887	0.8357446	1.1565091	1.2452666	1.1677488	0.7451959	0.8682891	0.8804926	0.9687114	1.0532428	0.8226156
Phase-1 RCT-42	1.0971215	1.0284513	1.1354513	1.08012	0.9693947	1.0878243	1.0482771	1.3803765	1.1357196	0.8778409	0.9398177	0.8909468	0.8504044
Phase-1 RCT-26	1.0447268	1.0284513	1.1354513	1.08012	0.9693947	1.0878243	1.0482771	1.3803765	1.1357196	0.8778409	0.9398177	0.8909468	0.8504044
Phase-1 RCT-25	0.9169465	0.9358976	1.0079169	1.070882	0.9730301	0.9730301	0.8602895	0.9253828	0.9253828	0.99980033	0.981535	1.0005371	0.8614597
Cytochrome P450 2C11	0.8626706	0.8308908	1.0078002	1.070882	0.9730301	0.9730301	0.8602895	0.9253828	0.9253828	0.99980033	0.981535	1.0005371	0.8614597
Phase-1 RCT-202	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874
Complement factor 1 (CF1)	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874
Proliferating cell nuclear antigen gene	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874	0.7502419	0.9119417	0.80893874
Activating transcription factor 3	1.452152	1.4229138	1.3566269	1.027302	0.9054137	1.2005317	1.2959927	0.7466352	0.9324309	0.7914989	0.7854103	0.8429454	0.8612565
Focal adhesion kinase (F125FAK)	1.452152	1.4229138	1.3566269	1.027302	0.9054137	1.2005317	1.2959927	0.7466352	0.9324309	0.7914989	0.7854103	0.8429454	0.8612565
Phase-1 RCT-289	1.1787131	1.118198	1.1143155	1.0520252	1.0776697	0.975015	0.8994918	0.1668282	0.8882984	0.9646615	0.8477629	0.308361	0.8070875
Phase-1 RCT-259	0.9329344	0.9356143	1.125447	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	0.9541525	1.11214	1.158474	1.6522335	1.5776864
Iron-responsive element-binding protein	0.9329344	0.9356143	1.125447	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	0.9541525	1.11214	1.158474	1.6522335	1.5776864
MHC class II antigen RT1A10 alpha-chain	0.9329344	0.9356143	1.125447	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	0.9541525	1.11214	1.158474	1.6522335	1.5776864
Phase-1 RCT-171	1.0401667	0.9329344	0.9356143	1.125447	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	1.11214	1.158474	1.6522335	1.5776864
Phase-1 RCT-83	0.8978297	0.7864513	1.1399226	0.9623505	0.9631887	1.0642863	1.0828327	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	1.11214
Colony-stimulating factor-1	0.8978297	0.7864513	1.1399226	0.9623505	0.9631887	1.0642863	1.0828327	0.89093874	0.8071444	0.8769133	0.8530366	0.8576224	1.11214
Nucleothion	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349
Phase-1 RCT-42	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349	1.049775	1.06349
Phase-1 RCT-22	1.1443768	1.068741	0.8807899	0.885324	0.9807899	0.885324	0.9807899	0.885324	0.9807899	0.885324	0.9807899	0.885324	0.9807899
AT-3	0.9808515	1.0350194	0.9808515	1.0350194	0.9808515	1.0350194	0.9808515	1.0350194	0.9808515	1.0350194	0.9808515	1.0350194	0.9808515
Phase-1 RCT-123	0.9355506	1.0066552	0.97241175	0.9785397	1.0819108	0.9672251	0.9846963	0.9573296	0.9846963	1.0478073	1.1987722	1.2102958	1.0478073
Phase-1 RCT-28	1.0347182	0.9654826	1.0463391	1.048279	1.0486468	1.0691247	0.97848643	1.0162556	0.9557053	0.9732775	0.7823728	0.7641804	0.9557053
Equilibrative nucleoside/nucleotide-carnitine nucleoside transporter	0.7097083	0.824417	0.8367375	1.0334295	0.945706	1.14033	0.633781	0.6886941	0.8073943	0.9073803	0.892858	0.8759003	0.7959186
Glucose transporter 2	0.9883814	1.087126	1.0397397	0.8200587	0.8401108	0.9032367	0.7557237	0.38219533	0.8156264	0.8678044	0.9482524	0.8415145	0.65602237
Multidrug resistant protein-2	0.9320208	0.985215	0.9754109	1.142536	0.96574855	0.9526648	0.881547	1.065178	1.1517367	1.0009338	0.9054885	0.8679771	1.3508863
Multidrug resistant protein-1	1.0060008	0.947808	0.9408375	1.1659911	1.0823314	0.9852354	1.0152503	1.185888	1.2470603	1.0983732	0.8612736	1.032389	1.733735
Phosphatidylethanolamine-binding protein	1.6174538	1.4105949	1.4398632	1.1940683	1.388811	0.97061706	1.5942869	1.0879312	1.1980125	1.0022185	1.1107457	1.143738	1.2884758
Phase-1 RCT-180	1.4500226	1.210986	1.1370832	0.9192763	0.9371897	0.86694837	1.2784389	0.9841081	0.8243672	0.9605548	0.99138685	1.0997815	1.1383106
Integrin beta-4	1.1596399	1.0783008	0.9689408	1.032484	1.069445	0.88169273	1.6732373	1.2933085	1.523765	1.2382175	1.5739128	1.3840535	1.2810882
NADPH cytochrome P450 oxidoreductase	1.1881977	2.1673952	1.1771952	1.3811027	1.070278	0.96236196	1.7637135	1.2933085	1.523765	1.2382175	1.5739128	1.3840535	1.2810882
Endogenous retroviral sequence, 5' and 3' LTR	0.58300785	0.9894511	0.7473582	0.9350918	0.87861863	1.054823	1.20441	0.8736808	0.8422484	1.655103	1.6540832	0.834979	0.9951027
Phase-1 RCT-53	0.9485134	1.030131	0.930918	0.9350918	0.87861863	1.054823	1.20441	0.8736808	0.8422484	1.655103	1.6540832	0.834979	0.9951027
Phase-1 RCT-54	0.9728523	0.9400008	0.985202	0.96990365	1.0095995	1.0007812	0.89000086	1.0888132	1.1014477	1.033663	0.9378926	0.7344103	0.60324436
Phase-1 RCT-240	0.8656497	0.8045271	0.8492144	0.8564728	0.8927455	1.1099462	0.8283686	0.8084051	0.8145311	0.698516	0.7344103	0.60324436	0.60324436
Oscoponin	0.8359486	0.94046025	0.98833	1.4527178	1.1867701	1.2207556	1.1672981	1.2151418	1.1295538	0.8163003	0.9278621	2.582397	2.8314931
Organic anion transporting polypeptide 1	1.037716	0.9338402	1.0770078	1.0667802	1.0394284	0.9458185	1.671435	1.3924694	1.0624273	1.1013346	1.1389764	0.9035107	0.88691014
Phase-1 RCT-241	0.9348168	1.0515985	1.019878	0.9889326	0.95719147	0.9207417	0.8894885	1.1037374	1.0001676	1.0065248	1.024254	0.9852292	0.9267411
Tissue factor pathway inhibitor	1.0704892	1.0288818	1.0546163	1.1800868	1.2507825	1.0474834	1.3670417	1.2136555	1.102137	0.8888114	0.8385768	1.4239761	1.577989
Cydn-dependent kinase 4 inhibitor P27dp1 (deltamale clone)	1.028109	0.8748953	0.97804165	1.4552564	0.82429435	0.9883525	0.926115	1.217693	1.1915625	1.168871	1.5872843	1.3914968	1.1323335
Phospholipase D	0.9418602	0.8954616	0.9122293	0.978632	1.0345397	1.0195594	0.9251143	1.273607	1.178178	1.0741416	1.0276735	1.0084673	1.0520194
Phase-1 RCT-39	1.0727206	1.0463391	1.0699257	0.92074704	0.9639406	0.9403413	1.151335	1.888952	0.96207384	0.99332486	0.9959339	0.9036992	0.9036992
Phase-1 RCT-259	1.0117688	1.0571942	0.9663092	1.0770381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381
Phase-1 RCT-113	0.95132875	1.0117688	1.0571942	0.9663092	1.0770381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381
Adrenaline nucleoside translocator 1	0.95132875	1.0117688	1.0571942	0.9663092	1.0770381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381	1.0470381
Alpha-1 acid glycoprotein	0.7236136	0.79376173	0.6096726	1.029321	1.2873895	1.3942651	0.9585935	2.6704419	0.9585935	2.6704419	0.9585935	2.6704419	0.9585935
MHC class II antigen RT1.B.4 beta-chain	0.7423635	1.303292	0.70395075	0.8145193	0.7183595	0.78117595	0.9700016	0.8221145	1.525008	1.1949005	1.2331726	1.578266	2.018069

Organic cation transporter 3	1.0305744	0.8265406	1.0437721	0.9157688	0.8959623	0.94027986	0.8797054	1.0603684	0.7381857	0.7847455	0.9302193	0.7776432	0.71241117	0.74220127
Hypoxia-inducible factor 1 alpha	0.971715225	1.0761705	0.987811	0.84135684	0.9028668	0.88556934	0.9123274	0.7595913	0.9171631	1.3718814	1.0210143	1.0652064	1.639032	1.3728383
Phase-1 RCT-143	1.1670768	1.0760913	1.0805598	0.9936593	1.090913	1.0237621	1.1834433	1.0959702	1.0968366	1.1201694	0.9802631	1.0216472	1.0046371	1.07808285
Phase-1 RCT-145	1.0341383	1.0043303	1.0718892	0.90174525	0.8903342	0.98181313	0.98779786	1.1390511	0.99742684	0.9675647	0.92405548	0.8745861	0.7814511	0.78089285
Matrix dehydrogenase, cytosolic	1.2164649	0.8980778	0.9965174	0.950399	1.054283	1.0413637	1.1542888	0.87573236	0.76650383	0.7587715	0.8446526	0.89532704	0.67682325	0.80510785
Y30 element	0.4330402	0.9763073	0.9593798	1.1310327	1.1750166	1.6235977	0.5213355	1.259401	1.6094284	1.4049947	1.3315424	0.9661767	0.70452714	0.6721959
Phase-1 RCT-189	1.1003511	1.2431216	1.1571995	0.9681927	1.2048218	1.1886743	1.2448912	0.8006017	1.0323385	0.6919687	0.9406412	0.7075406	0.4937252	0.7188181
Alpha-fetoprotein	0.9765444	0.9954204	0.9931919	0.8377713	0.9797102	0.8888916	0.92811066	0.8407358	0.96591656	0.96591656	0.9102943	0.9434062	0.9701166	1.0124833
Calgranulin B	0.7602408	0.8779746	0.9033087	1.0031458	1.1137884	1.1717783	0.84013027	0.89044824	0.8959658	0.681766	0.7745609	0.59633694	0.80731895	0.64645755
Tissue plasminogen activator	0.96201944	1.0612655	0.966337	1.004016	0.9900334	0.95923824	0.8931444	0.8720551	0.9371789	0.7637527	0.81024	0.80762145	1.0562369	1.0013594
Phase-1 RCT-195	0.94120276	0.88811934	0.83143207	0.8448891	1.044144	1.00073	1.0703577	0.94108665	0.9414504	0.9041836	0.9411082	0.80576997	0.7771954	0.96061795
Liver fatty acid binding protein	0.47614135	0.7137624	1.0848109	0.8743523	1.0053974	0.66232795	0.8115738	1.1087195	0.92761956	0.5749732	0.75059735	0.49314609	0.7382631	0.5462707
Alpha-1 microglobulin/bikunin precursor (Arbp)	0.9838367	0.9662204	1.10778	1.0365168	1.1747811	0.86232795	0.8417642	0.9946902	0.93114746	0.10105559	0.7386007	0.8753817	0.67783244	0.6952707
Phase-1 RCT-294	1.009647	1.0053028	0.95371544	1.0768988	0.91364306	0.8804807	1.0243993	0.8653249	0.8653249	1.1702762	1.2605441	1.3172411	1.2018703	1.2370872
Phase-1 RCT-151	1.0931416	1.0926198	1.1434957	0.9481844	0.9968431	0.96729475	1.0169681	1.3915792	1.3539162	1.2947565	1.3412527	1.4283513	1.1907647	1.1973222
Phase-1 RCT-158	0.9377263	1.0269024	1.078371	0.9072837	0.95372534	0.8804807	1.0243993	0.8653249	0.8653249	1.1702762	1.2605441	1.3172411	1.2018703	1.2370872
Phase-1 RCT-221	1.0448207	1.0287507	0.9411498	0.9743833	1.1178569	1.1038841	1.1431226	1.0768095	1.0657519	1.1701856	0.9633684	1.1363463	0.88433374	0.96558356
Phase-1 RCT-225	1.0160434	1.0061693	0.9058333	0.88113844	1.0046981	1.1052361	1.1431226	0.99002977	0.8686913	0.9226637	0.82013806	1.101999	1.3518989	1.4717504
Cytosolic anion transporter 3	0.95224386	0.9280157	0.91900866	1.555274	0.9332466	1.2331324	0.93226147	0.7518623	0.99831504	0.9920586	0.7408897	1.0687732	1.564284	1.6530691
Matrix metalloproteinase-1	0.7543654	0.74912508	0.7489557	0.855909	1.0374777	0.93226147	0.7518623	0.99831504	0.9920586	0.7408897	1.0687732	1.564284	1.6530691	1.4717504
Urinary protein 2 precursor	0.5702739	0.6275845	0.81523526	0.91349703	0.904515	0.9792126	0.7398791	0.8248716	0.93796283	0.45871967	0.5174911	0.45316155	0.40311858	0.42599732
Phase-1 RCT-212	0.8336432	0.8106836	0.8402128	0.9507755	0.9106812	1.0536751	0.8627747	1.0068879	1.0500882	1.0894178	1.1343453	1.120727	1.0167435	0.8820568

(1) Gene expression data for 8 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes-nec, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed

(5) Predictive gene (as in Table 18 and as included in Table 26)

Table 28

Table 28

[illegible]

Phase-1 RCT-32	0.92351473	0.93035635	0.9770282	0.8535485	0.94740075	0.8943736	1.0028572	1.0657485	1.0981241	1.1153239	1.0285225	1.0761375	1.2074234	1.4123521
Peptidomimetic assembly factor 1	1.3250884	1.1100702	1.2460089	1.3271627	0.90780334	1.0353588	1.0476867	0.95814206	1.0739198	1.1060634	1.1055566	1.1055124	0.9829956	
6-oxoindole-DNA glycosylase	0.8758605	0.0531216	1.0174766	0.901582	0.9218414	0.90656585	1.0678612	0.989176	1.097379	1.0061163	0.9629749	1.0342474	0.9807161	
Phase-1 RCT-62	1.249107	0.83697857	0.856136	0.6565326	0.8374178	0.98565302	0.9015519	0.98015046	0.961758	0.8653934	1.0532186	0.9361525	0.9182207	
Matrix F1G	0.7892468	0.5112303	0.9356905	0.422414	0.85330768	0.5318337	0.844102	0.9783883	0.93827313	1.1847388	0.8317856	1.0881884	0.5458975	0.9418248
Phase-1 RCT-164	0.6892084	1.020684	0.9352924	0.8191394	0.81340655	1.1078234	0.7691912	0.7691278	1.2426528	0.9800668	1.4274539	1.320774	1.503712	1.0231233
Phase-1 RCT-168	0.4552026	1.137693	0.8592924	0.8510197	0.8811974	1.248408	0.7691912	0.7691278	1.2426528	0.9800668	1.4274539	1.320774	1.503712	1.0231233
Phase-1 RCT-119	2.119286	0.6163734	1.0116212	1.1463306	0.7727119	0.6587093	0.8811152	0.8688115	1.0738576	1.4023463	0.7903232	0.8782764	0.6348925	1.2747658
Carbonic anhydrase II	0.8003556	0.940738	1.0116212	1.1463306	0.7727119	0.6587093	0.8811152	0.8688115	1.0738576	1.4023463	0.7903232	0.8782764	0.6348925	1.2747658
Trypophan hydroxylase	0.8003556	0.940738	1.0116212	1.1463306	0.7727119	0.6587093	0.8811152	0.8688115	1.0738576	1.4023463	0.7903232	0.8782764	0.6348925	1.2747658
Phase-1 RCT-71	4.228915	0.8593785	1.7008628	2.481638	1.4094326	1.6588723	1.0987634	1.2167374	1.9186268	1.6539587	1.8494948	1.1742262	1.8441302	1.2288457
Phase-1 RCT-179	1.5035985	1.7008628	4.228915	2.481638	1.4094326	1.6588723	1.0987634	1.2167374	1.9186268	1.6539587	1.8494948	1.1742262	1.8441302	1.2288457
Phase-1 RCT-161	1.4578251	0.85948475	0.8617937	0.9350957	0.77294075	0.8653157	0.967033	1.7165074	1.2288457	1.4988973	1.17091	1.2785003	1.0091977	
Phase-1 RCT-207	8.332655	0.87853468	0.96169025	0.90558846	0.9868625	0.84653157	0.967033	1.7165074	1.2288457	1.4988973	1.17091	1.2785003	1.0091977	
Phase-1 RCT-144	1.914992	1.3529677	1.6870812	1.57457	1.158573	1.265471	2.597655	2.786812	2.597655	2.786812	1.138384	1.9528727	2.8550112	1.0017062
Phase-1 RCT-225	1.284452	0.67236858	0.7486572	0.67035395	1.187663	0.9003517	1.207283	2.154617	2.597655	2.786812	1.138384	1.9528727	2.8550112	1.0017062
Cytochrome P450 2E1	1.3281863	1.2500467	1.2920176	1.2680922	0.7665138	1.1402076	0.8962303	0.9258686	0.6214033	0.8089083	0.7393297	0.7780745	0.9442002	1.0716884
Phase-1 RCT-225	2.0650765	0.98604183	0.80294657	1.0505687	0.89592566	1.022515	1.1843426	1.4043199	1.1588248	0.9585564	1.1384571	0.9200273	1.2581404	1.5535866
Thioredoxin-1 (Trx1)	1.0071559	1.0304691	1.2193178	0.85202676	1.1992112	0.78047615	1.1843426	1.4043199	1.1588248	0.9585564	1.1384571	0.9200273	1.2581404	1.5535866
Carbonic anhydrase III	0.34521955	0.8573788	0.82407	0.457002	0.2938376	1.126509	0.741356	0.2715263	0.38867468	0.6352018	0.2433354	0.2678257	0.2678257	0.2678257
Phase-1 RCT-140	1.2844059	0.8891784	0.9277087	0.841503	0.9343388	0.860777	0.8238688	0.8494324	0.9220971	0.871181	0.9393477	0.8552682	1.0230076	0.8957026
Complement component C3	0.2806647	2.3615653	2.3697277	1.3407848	1.0038022	1.0531083	1.5822382	0.7105795	0.788549	0.7393379	0.3734688	0.6556082	1.0230076	0.8957026
Glucokinase	0.5939342	0.85954274	0.9503576	1.295534	0.7507696	1.0991093	0.842023	1.2714884	1.3804253	1.5879445	1.2335694	1.5443233	1.3351859	0.97156684
Phase-1 RCT-173	1.1119214	0.8128948	0.8440108	0.9398412	0.8757276	0.8256584	0.8873827	0.75212345	0.73736244	0.4717007	0.8550773	0.82752545	0.71123034	0.86181836
3-methylglutamate DNA glycosylase	1.1915566	1.0075295	0.9790894	1.254566	1.0046355	1.0162566	0.94080514	0.9500058	0.97189965	1.0272598	1.0128808	1.0733687	0.9195286	0.8463196
Periodontal multifunctional enzyme type II	0.58219266	1.4468905	0.9790894	1.254566	1.0046355	1.0162566	0.94080514	0.9500058	0.97189965	1.0272598	1.0128808	1.0733687	0.9195286	0.8463196
Phase-1 RCT-40	0.39357046	0.9200765	0.95537245	0.62950134	0.8418249	0.8178517	0.8418249	0.8178517	0.8418249	0.8178517	0.8418249	0.8178517	0.8418249	0.8178517
Stress marker protein-30	0.20655118	1.096267	1.5293292	0.8273349	0.86917895	1.223318	1.1814744	0.68587676	0.6076436	0.44403762	0.31511304	0.5811751	0.565589474	0.8990287
Cytin G	3.6007186	1.5188445	2.003763	1.3158327	1.8472654	1.273749	1.2288648	2.7758943	1.8117791	1.5653093	1.618763	1.471769	3.109558	0.828543
Melanosomal-associated antigen ME491	0.8264689	0.9772607	1.085388	1.1845416	0.9103044	1.1117882	1.2920255	0.2972626	0.3121358	0.925537	1.04342	1.0514648	0.97124714	
Phase-1 RCT-28	1.2451439	0.8329049	0.9629057	1.0794252	0.8200957	0.86048833	1.0428512	0.9011254	0.9679776	1.0463473	1.0541203	0.92801434	1.0600025	
Enamin	0.84453843	0.8743508	0.7654446	0.7659084	0.84033784	0.6955857	0.871429	1.1213508	1.2493126	1.261604	1.1256912	1.0940326	1.2757188	0.8471507
Alcohol dehydrogenase 1	0.7839322	0.9002844	0.54155494	0.64158665	0.6577853	0.8930465	0.8770221	0.5854148	0.4792224	0.5098004	0.399106	0.46704257	0.6969736	0.78147502
Stem cell factor	0.3552267	1.0001287	1.1375046	0.92355324	1.0280681	0.9584123	1.2428571	0.9192463	1.0276536	0.8536892	0.74617	0.1079616	0.6871524	1.152353
JNK1 stress activated protein kinase	1.8231218	0.58780123	1.3271211	1.120583	1.0234831	1.3450413	1.476913	0.8256833	0.97284063	0.8557858	0.880236	0.954695	0.94674426	0.9780476
Protein tyrosine phosphatase alpha	0.74972405	0.75509717	0.8686116	1.027643	0.91201466	1.28162	0.99275845	0.0531728	0.846477	0.8554151	0.7658817	0.7616037	0.822519	1.0528472
DNA topoisomerase I	1.0204953	1.582541	2.5777217	1.7114688	1.3151446	1.383181	1.0583028	1.1897718	1.057068	1.1671059	1.2701374	1.104426	1.2518008	1.215034
Phase-1 RCT-280	0.3075698	2.3251815	2.4081672	1.3993541	0.9814594	1.1225296	1.5057071	1.6183353	1.4717432	1.285896	1.238216	1.2650763	1.4154748	0.9657008
Phase-1 RCT-45	0.8956027	1.0481311	1.1514975	0.7430298	0.9837055	1.0748622	1.0313076	0.78279334	0.74441979	0.74540504	0.83244213	0.8324785	0.7568697	1.1502824
Superoxide dismutase Mn	2.2801543	2.8453303	6.6514874	2.055473	6.7094407	0.87165666	1.2564618	1.2564618	1.0680243	0.9901867	0.8324785	0.7568697	1.1502824	1.035352
Beta-tubulin, class I	0.7217015	0.3617672	0.38240057	0.2722875	0.5063888	0.4062072	0.4847111	0.6915273	1.335165	1.6509663	0.87492317	0.6483336	0.7860274	1.3020518
Cardiomyocyte phosphatase	0.9434735	1.0733553	0.70338354	1.2733774	0.9206715	0.83861805	1.0685323	1.1384241	1.1563531	1.046597	0.984165	1.0698876	1.0295401	0.7771434
Disacetylase kinase zeta	3.1235585	2.7848215	4.804972	1.9742936	1.7979631	0.9200452	2.005483	0.9237409	1.2570283	1.473382	2.565831	1.5281273	4.365235	0.971204
Phase-1 RCT-141	1.93706	1.0918333	1.1556483	1.1035241	1.123189	1.0312892	0.88851633	1.3275882	1.5320332	1.8057389	1.555195	1.2691565	1.4776924	0.90432318
Gamma-actin, cytoplasmic	0.48068223	0.92346896	0.8109144	0.855688	0.800445	1.365569	0.5972671	3.3871416	1.7194846	1.5387408	1.3312012	1.194432	1.4744804	0.90432318
Ribosomal protein L13A	1.4947723	1.7081659	1.932786	0.83307153	1.1181859	0.7175415	0.5972671	3.3871416	1.7194846	1.5387408	1.3312012	1.194432	1.4744804	0.90432318
Phase-1 RCT-45	0.7238974	2.304007	2.278453	1.6519462	1.484108	1.553029	1.2481897	1.314826	1.188173	1.1589574	1.0021808	1.175059	1.0573914	1.0361423
Phase-1 RCT-45	3.0537068	0.774588	0.7758331	0.8514756	1.038242	0.8500885	0.9434525	0.8978643	2.0520449	2.195232	1.4784111	1.674237	0.7555109	0.9429238
c-Jun	19.5575	0.9031206	0.309069	1.069586	1.3716072	0.7587181	0.8435775	1.9331286	1.8582604	1.8584681	2.2930316	0.9724688	2.6558284	0.8807335
Protein O-mannosyltransferase 1 (PomT1)	3.05714	0.6946535	0.64345783	0.57487696	1.3544778	0.88011856	0.8805106	1.7654039	1.8855009	1.544999	1.5688617	1.7544655	1.7949228	0.7281658
HMG CoA reductase	1.1848314	1.596368	1.3232748	1.5546683	0.9643844	1.1157764	0.98550725	1.1545228	2.14149	1.6993072	2.1288087	1.60383	2.0639753	0.86308718
Phase-1 RCT-12	1.3775893	0.9803517	0.9517191	0.89885	0.85017425	1.2518442	1.3489261	1.6257655	1.3895155	1.1594118	1.6884385	0.8533044		
Interferon related developmental regulator IFD1 (PC4)	9.338887	1.0884724	1.2428341	0.9731662	1.1807465	0.8377063	1.276896	1.3465952	1.2687835	1.1382556	1.3278651	1.1397174	1.67488	1.2101073
Glucose-regulated protein 78	1.9555754	2.2570465	3.7028488	1.677869	2.32677	1.013893	2.22306	2.33841	2.168645	2.871626	3.1803303	1.1541747	3.433728	0.9406298
3-hydroxyisovaleryl dehydrogenase (HSD17B1)	0.8355773	1.2955503	1.2154696	0.78528714	1.176074	0.948908	0.6587741	0.9125461	0.9345486	1.0175962	1.004205	0.9554967	0.9176539	1.17681
Caspase 6	1.884711	0.9848758	1.0501101	1.3244492	1.184548	0.85323715	1.0167874	1.482948	1.482948	1.482948	1.482948	1.482948	1.482948	1.482948
Phase-1 RCT-169	1.5242408	0.850423	0.850423	1.0004084	1.4841843	0.722599	2.2148275	0.6501291	0.6501291	0.6501291	0.6501291	0.6501291	0.6501291	0.6501291
Phase-1 RCT-169	3.551137	0.820873	1.056061	1.0211911	1.1739801	0.8226021	0.8226021	1.0211911	1.1739801	0.8226021	0.8226021	1.021		

Phases 1 RCT-72	1.1270534	0.81064034	1.0228473	1.4478388	1.15218975	0.00045205	1.0341616	1.0191278	1.1671978	1.3555491	1.6770041	0.8350559	1.4900531	0.9505300
Pyruvate kinase, muscle	2.04639593	0.98206694	0.9290801	1.0119042	1.0804341	0.99301267	0.9397758	0.9371322	1.023769	1.0948832	0.7190501	0.8550428	1.0564178	0.8564718
Phase-1 RCT-68	0.4865148	0.6705544	0.5623978	0.4502039	0.6298441	0.81789294	0.94008746	0.9371322	0.9637300	0.4446324	0.8550428	0.8550428	0.81542874	1.3221117
Phase-1 RCT-60	1.63702302	0.87235075	0.8943227	0.1785301	1.1808023	0.91803607	1.0871588	0.9738081	0.9738081	1.10254	0.972488	0.9562936	1.0356412	0.9562936
Cytochrome P450 2C9 (all allele clone 2)	0.31730652	1.656258	1.7848713	0.57481205	3.990077	1.6754056	1.0874559	1.0874559	0.9629095	0.9629095	0.9629095	0.9629095	0.8816139	0.9629095
Cytochrome P450 2C9 (all allele clone 2)	0.31730652	1.656258	1.7848713	0.57481205	3.990077	1.6754056	1.0874559	1.0874559	0.9629095	0.9629095	0.9629095	0.9629095	0.8816139	0.9629095
Phase-1 RCT-1250	1.2387166	0.1001156	0.33591332	0.309065	0.6941601	0.40785195	0.9644111	0.9051921	1.1865072	1.3504411	1.188907	1.0358131	1.0358131	0.80627415
Phase-1 RCT-261	0.31162555	1.1911425	1.345035	0.1026255	1.1687501	0.9787128	0.9283943	1.0053421	1.1889086	1.2101206	1.0011921	1.3363395	0.9602153	0.8007115
Methylglucanase alpha	0.31162555	1.1911425	1.345035	0.1026255	1.1687501	0.9787128	0.9283943	1.0053421	1.1889086	1.2101206	1.0011921	1.3363395	0.9602153	0.8007115
Cytochrome P450 1A2	0.7784152	0.8958068	1.2802995	0.6140544	1.1443735	0.8518445	1.2034928	1.1397126	0.9556039	0.9556039	0.9556039	0.9556039	0.9556039	0.9556039
Phase-1 RCT-287	1.5759377	0.87071014	0.9295924	0.94069794	0.8606208	1.0392302	1.0392302	1.0392302	1.0392302	1.0392302	1.0392302	1.0392302	1.0392302	1.0392302
Monomethoxy oxidase B	0.41455131	0.3593198	0.9294411	0.4986228	0.8805301	1.2645367	1.359114	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169	1.543641	1.2351394	1.0323151	1.0323151	1.0323151	0.9781295	0.849257	0.6964603	0.6964603	0.6964603	0.6964603	0.6964603
Phase-1 RCT-143	0.3955557	1.2832169												

Organic cation transporter 3	0.7247326	1.5818412	2.1345587	1.4514248	1.1886784	1.0942092	1.25032	0.3920307	0.91618545	0.95421281	0.9929005	0.9157281	0.87730217	1.0618217
Hypoxanthine phosphoribosyl transferase 1 alpha	1.0633366	0.8895624	1.1836379	1.2655443	1.2247824	1.0522095	1.2635466	0.9213163	0.9863725	0.89710784	0.79567911	1.0239662	0.7131687	0.9865582
Phase-1 RCT-43	1.0432123	0.8535023	0.8003367	0.7975953	0.7474357	0.7595279	0.8986818	0.86501637	0.9281528	0.98676185	0.97780616	0.9159045	1.1619612	0.9700462
Phase-1 RCT-49	1.0432113	0.8115974	0.8453528	0.9107016	0.9345784	0.9045784	0.9586553	1.0000981	1.1000463	1.0740689	1.1720184	0.8851045	1.2794782	1.0055114
Male dihydroepiandrosterone, cytosolic	0.55923183	1.031288	1.1254658	0.7595002	0.9638643	1.1046582	1.2705188	1.3287738	1.5743328	1.3556184	1.2705285	0.8562694	1.0322077	0.9522077
VL30 element	0.60094584	0.8428633	0.9578482	0.9439302	0.9443414	0.97222564	1.0586355	1.6974913	1.7297718	0.9494075	2.3353157	0.8862782	2.510405	0.9761255
Phase-1 RCT-189	1.0530533	0.8967421	0.4996794	0.5004361	1.0043988	0.9394096	1.1516245	0.540427	0.9326088	0.6065645	0.90517504	0.6145474	0.90309306	1.0968194
Alpha-fetoprotein	1.3083322	1.4054549	1.5342116	1.4148084	1.3257304	1.2974865	1.1022481	0.9139603	1.0000514	0.8913628	0.8227241	0.9328102	0.8253432	1.2196988
Calgranulin B	0.4289424	1.31871	1.2137658	0.50841265	1.0739688	1.3072203	0.9848324	0.77155244	0.9925508	0.8988261	1.3388053	0.8592984	1.0362389	1.0795291
Tissue plasminogen activator	0.8333108	0.8654905	0.89854205	0.7302395	1.047237	0.9244166	0.8713399	0.87570786	0.9346794	0.9696501	0.91817915	0.9968811	0.88485044	1.0033535
Phase-1 RCT-185	0.88758425	0.8403744	0.7356211	0.69050286	0.8944962	0.7634607	0.92867545	1.2130237	1.138827	1.1701813	0.94765246	0.904511	1.0029683	1.08776
Liver fatty acid binding protein	0.2779189	1.3821452	1.4536741	0.78277975	1.081895	1.2586516	0.8830119	0.85105594	0.68909596	0.47671602	0.4833944	0.6921694	0.83348304	1.2203408
Alpha-1 microglobulin/bikunin precursor (Amp)	0.59102154	1.4980462	1.5052874	1.078143	1.0826925	1.3206339	1.1322818	1.0383575	1.013196	1.061187	1.121406	0.6771588	0.9857686	1.2012482
Phase-1 RCT-294	1.5387313	0.8247408	0.9974234	0.9628088	0.981775	0.9077368	0.9039548	0.8238185	0.8895777	0.9784029	0.9510075	0.9695089	0.9203236	0.9500607
Phase-1 RCT-151	0.64865076	1.2084465	1.2303172	0.9940502	0.9307641	0.9947241	1.0081052	1.2693932	1.278117	1.1263684	1.175526	1.1852206	1.462836	0.9240423
Phase-1 RCT-158	1.700263	1.0354351	0.9804289	1.0328947	0.9807846	0.8701985	0.9142857	0.8675846	0.8699149	1.0218336	1.0551201	3.0118814	1.1328280	0.9404023
Phase-1 RCT-221	1.0378331	0.9182248	0.73012805	0.7378978	0.65483177	0.56398568	0.8387592	1.0619041	1.0077071	1.0987153	1.1576934	1.0550746	1.2389913	0.8858984
Phase-1 RCT-235	1.0170432	0.72001567	0.66938468	0.5300563	0.8804867	0.8234916	0.94058158	0.9687832	0.89590836	1.0123688	0.9304818	0.9242173	0.9001579	0.8682195
Organic anion transporter 3	1.203462	0.9544263	0.7959583	1.180674	0.84788857	1.0588868	1.0417583	0.84481014	0.77806346	0.63044107	0.949161	0.79466086	0.51103354	1.1667789
Neutrophil gelatinase-1	1.5348328	1.4380275	1.5708599	1.1139706	1.0305166	1.5960471	0.7094278	1.8254836	1.2999136	1.0790876	0.8637775	2.3856344	0.6774331	1.312709
Urinary protein 2 precursor	0.38295403	1.255217	1.4966178	0.7071836	0.91595674	1.2054161	1.4181455	0.68618164	0.7515533	0.6237259	0.6079804	0.67007166	0.50593865	1.3963865
Phase-1 RCT-212	1.0584634	0.862872	1.0157853	0.97511	1.0545986	0.8246079	1.1156482	1.3270696	1.2115074	1.2222428	1.3288201	1.080513	1.4374882	0.8708001

(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes=neor, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathologic observed

(5) Predictive gene (as in Table 18 and as included in Table 28)

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)																			
Compound/Dose (2)	Animal Number (3)	Uter Toxicity Inflammation Classification (4)	BEN 250	BEN 250	BEN 1000	BEN 1000	BEN 1000	BEN 1000	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30	BAP 30
			no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Genia Name (5)	0.8549334	1.0717798	1.0504934	1.0515112	1.0748788	1.3534724	0.7378288	0.91442025	2.2355814	1.0887092	1.2400824	1.144817	5.54081	1.113687					
Interleukin growth factor binding protein 1	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761	0.9683761
Grd1/IS	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082	1.0201082
C-myc	1.2883326	0.8742318	1.3263052	1.2025973	0.9983561	1.4074468	1.2071858	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038
NIIP	0.9678768	1.276452	1.292512	1.4868503	1.260369	1.3073148	1.0078548	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038
Calreticulin L, sequence 2	1.1904697	0.9747446	1.1950681	0.9822743	0.95392374	1.2854443	0.9157758	1.0379043	1.1447014	1.3847478	1.2901598	1.5504164	1.9094368	2.6704357					
Heme oxygenase	0.8770487	0.9773283	0.765593	0.8948162	0.8728407	0.9272324	0.8283066	0.702058	1.1787997	1.3747894	1.6300658	1.2702735	0.9888755	1.6300658					
Phase-1 RCT-109	0.86802894	0.92204213	0.915888	0.862024	0.97534394	0.9622272	0.7771134	1.0600881	1.0078548	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038
Arjunosuccinate lyase	1.0244849	1.2148846	1.2902077	1.3580881	1.0105871	1.2600081	1.0078548	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038	0.8623038
DNA polymerase beta	0.8936787	0.8941816	0.94088206	0.8264538	0.9820885	1.0242472	0.7771134	1.0600881	1.0078548	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038
Phase-1 RCT-103	0.87981135	0.89294684	0.96347034	0.862024	0.97534394	0.9622272	0.7771134	1.0600881	1.0078548	1.1603937	0.9718095	0.8659616	0.8994726	0.8112546	0.9820526	0.8623038	0.8623038	0.8623038	0.8623038
Phase-1 RCT-103	0.70639465	0.7747168	0.90221	0.7959537	0.7923411	0.9765598	0.895226	1.248122	0.9638835	1.4372851	1.7909556	1.139236	1.2622378						
Phase-1 RCT-114	1.1207148	1.0587201	1.1049299	1.016855	0.97124238	1.0601276	0.9500892	0.8385158	0.9838963	1.0144541	1.1007290	1.2032462	1.227331						
Phase-1 RCT-15	1.0947173	1.1697381	1.271488	1.3232657	1.1787271	0.884738	1.050056	0.86210874	1.4680423	1.1552873	1.3121269	1.1872265	1.4264657	0.6117847					
Phase-1 RCT-15	0.9577506	1.352949	1.2373819	1.2273024	1.1747035	1.1052634	1.0462251	0.936668	1.0451177	0.9681158	2.0376859	2.638398	1.6586162						
Microphage inflammatory protein-2 alpha																			
NGF-Inducible anti-proliferative putative secreted protein (PC3)	0.82549727	0.7710759	0.94734794	0.8855401	0.8494068	0.94755823	1.0350783	0.7986226	1.08044	1.0441872	1.0161572	1.2893995	2.9519033	2.615093					
Phase-1 RCT-191	1.2647693	1.1906615	1.162903	1.2592068	1.2496509	1.2885769	1.2709783	1.055761	1.3571642	1.3745898	1.0981573	0.8142092	0.4678062	0.3262506					
Phase-1 RCT-191	0.8623445	1.2812889	1.3271704	1.4374092	1.2151479	0.98906066	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686	0.9119686
Phase-1 RCT-63	1.143575	0.963617	1.3591285	0.8741248	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956	0.8607956
Cyclin D3	0.806683	0.9515416	0.93712205	0.8683728	0.98400885	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728
Phase-1 RCT-106	0.9637626	0.9515416	0.93712205	0.8683728	0.98400885	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728
Phase-1 RCT-106	0.97347516	0.9515416	0.93712205	0.8683728	0.98400885	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728	0.8683728
Phase-1 RCT-192	0.942078	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577	0.8281577
Acetyl-CoA carboxylase	0.929658	0.96742004	1.0090622	0.94543264	1.0747649	0.97555914	1.0683472	0.9840538	1.0463791	0.9687701	0.8183389	0.8851501	0.8708814	0.8644366	2.7885547				
Phase-1 RCT-95	1.0836247	0.9682187	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584	0.9276584
Oxalate C	1.1629713	1.0358545	1.169446	1.018891	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594	0.98040594
Phase-1 RCT-49	0.94035946	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048	0.9632048
Phase-1 RCT-49	1.22626	1.1544037	0.9667532	1.4173826	1.0051656	1.2703856	1.2591488	1.653206	0.7213782	0.9371792	0.7638173	0.9979213	1.3960526	2.1730058	2.8944533				
Phase-1 RCT-156	0.96437466	0.9061555	1.0382477	1.604966	0.9048334	0.9197088	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114
Phase-1 RCT-127	1.031116	1.317512	2.12887	1.3809446	1.0288526	1.0061869	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199	0.9673199
Macrophage inflammatory protein-1 alpha	1.126603	1.0347207	0.943564	1.0613304	0.97222364	1.1255492	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114	0.9072114
Zinc finger protein	0.94453008	0.912441	0.923537	1.0541768	0.6655083	1.000762	1.0942683	0.7622418	0.8726465	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034
Phase-1 RCT-73	0.879449	0.8852004	0.9218724	0.6655083	1.000762	1.0942683	0.7622418	0.8726465	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034	1.3063034
Glutamine synthetase	0.832536	0.8665646	1.075072	0.723774	0.8757236	0.7462706	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236	0.8757236
Calc-binding protein	1.3600449	1.1483311	1.1271965	1.2467059	0.9802957	1.0186136	1.0783002	0.9350919	0.9841146	0.8053488	0.80548154	2.2416735	2.0840216	1.8131637					
Phase-1 RCT-242	1.0317638	1.1117833	1.1201995	1.0554614	1.015217	0.9361773	1.1907614	1.104833	0.9361803	0.8430437	0.8139131	1.1733599	1.3352966	0.9549855					
Phase-1 RCT-50	0.8794031	1.0317638	1.1117833	1.1201995	1.0554614	1.015217	0.9361773	1.1907614	1.104833	0.9361803	0.8430437	0.8139131	1.1733599	1.3352966	0.9549855				
Elongation factor-1 alpha	0.96189946	1.0995677	1.0380127	0.91768706	1.0422418	1.2135237	0.9651675	1.2003436	1.2152038	1.2120681	1.40359	0.7625373	1.1465506	2.3427007					
Interleukin beta 1	0.996534	1.2488013	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992	1.0400992
Interleukin growth factor binding protein 5	1.0621262	1.051865	0.96470183	1.0979718	1.0629542	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175	0.86239175
Phase-1 RCT-49	0.93937564	1.034819	1.0130275	0.95898715	1.0372078	0.98772406	0.9336194	1.0611028	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194	0.9336194
Phase-1 RCT-76	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456	0.88501456
Fenilin H-chain	0.9207486	0.8863108	0.9926476	0.7476332	0.9372163	1.0741625	0.9013224	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976	0.87582976
Selenoprotein P	1.208476	0.8763174	0.965869	0.9406514	0.84569534	0.8374233	0.8316043	0.8316043	0.8316043	0.8316043									

Phase-1 RCT-32	1.4391015	1.4207483	0.8668482	1.4148178	1.0853916	0.8911089	1.062768	1.0821817	1.0171797	0.9689337	0.8632107	1.0085654	1.041457	0.9355004
Proteinase assembly factor 1	1.1076563	1.1384281	1.0323869	1.0730468	1.0238961	0.8975245	1.0330118	0.9643559	0.85032916	0.85032916	0.85032916	0.85032916	0.85032916	0.85032916
8-oxopropionate O-methyltransferase	0.9671794	1.076537	1.060725	1.0681694	0.9283683	1.0321698	1.091515	0.988203	0.8888885	0.8888885	0.8888885	0.8888885	0.8888885	0.8888885
Phase-1 RCT-32	1.033428	0.98662816	0.96272597	1.0045571	1.053785	1.0744798	1.0323237	0.93321715	0.909407	0.909407	0.909407	0.909407	0.909407	0.909407
Malin F/G	1.0462224	0.930493	1.127998	0.7827158	0.995969	0.953024	0.9467953	1.00935	0.969919	0.969919	0.969919	0.969919	0.969919	0.969919
Phase-1 RCT-184	1.0075557	1.0425428	0.9655765	0.99280185	0.985818	0.9789651	0.9427238	0.9402623	0.934744	0.934744	0.934744	0.934744	0.934744	0.934744
Phase-1 RCT-168	0.9847147	0.9491282	0.9576606	0.85339659	0.8534285	0.8789651	0.9391113	1.1608913	0.907107	0.907107	0.907107	0.907107	0.907107	0.907107
Phase-1 RCT-119	0.9400775	0.93529433	0.9226168	0.87670358	0.8557934	0.9561773	1.0265778	1.2082717	0.94712824	0.94712824	0.94712824	0.94712824	0.94712824	0.94712824
Carbonic anhydrase II	0.8844503	0.92610735	0.8884428	1.1211212	0.9561773	0.9561773	1.063828	1.382377	0.94712824	0.94712824	0.94712824	0.94712824	0.94712824	0.94712824
Tryptophan hydroxylase	1.158875	0.8056621	0.9783353	0.8726675	1.0502459	1.0502459	1.251974	1.195945	1.0225435	1.0225435	1.0225435	1.0225435	1.0225435	1.0225435
Phase-1 RCT-179	1.12049	1.034931	0.9682401	0.775818	1.0327267	1.042189	0.94782254	1.2046851	1.046851	1.046851	1.046851	1.046851	1.046851	1.046851
Phase-1 RCT-181	1.138107	1.0653897	1.0216721	1.1776572	0.96619076	0.9353804	1.0573982	0.94557846	0.95797877	0.95797877	0.95797877	0.95797877	0.95797877	0.95797877
Phase-1 RCT-207	1.2152584	1.0746903	1.0689196	1.071363	1.0460803	0.97784825	0.97784825	0.97784825	0.97784825	0.97784825	0.97784825	0.97784825	0.97784825	0.97784825
Phase-1 RCT-144	1.2311654	1.1519616	1.1281474	0.943449	1.0185765	0.8571203	1.001341	0.94009125	0.92332536	0.92332536	0.92332536	0.92332536	0.92332536	0.92332536
Phase-1 RCT-225	1.3046439	0.9353538	1.3432908	0.8949306	1.212373	3.1801095	1.6550921	1.3404051	1.3270121	1.3270121	1.3270121	1.3270121	1.3270121	1.3270121
Cyclodextrin P450 2E1	1.106448	0.8185945	0.8329575	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358	0.835358
IL-1	1.2192289	1.0536817	1.1062229	1.081082	1.0023307	1.0071018	0.94658047	0.95426334	0.831251	0.831251	0.831251	0.831251	0.831251	0.831251
Thioladenin-1 (Tol1)	1.3765562	1.659673	0.9092153	0.89113235	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295	0.8404295
Carbonic anhydrase III	0.9681472	0.9691217	0.9734425	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535	0.8112535
Phase-1 RCT-140	0.7889027	0.925605	1.1407012	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265	0.9346265
Complement component C3	0.8651947	0.75943524	0.9382665	0.8655655	0.782422	0.8530602	0.9675494	1.3517824	1.3270768	1.3270768	1.3270768	1.3270768	1.3270768	1.3270768
Glucosylase	1.4660759	0.968723	0.9588154	0.9447475	1.0079452	0.93583417	0.9188989	0.9438915	0.8644575	0.8644575	0.8644575	0.8644575	0.8644575	0.8644575
3-methyladenine DNA glycosylase	1.042255	1.030221	0.9588154	0.9447475	1.0079452	0.93583417	0.9188989	0.9438915	0.8644575	0.8644575	0.8644575	0.8644575	0.8644575	0.8644575
Peroxisomal multifunctional enzyme type II	1.097673	0.9772015	1.014494	1.127635	1.1291928	0.8700024	0.8271677	0.8514841	1.1832218	1.1832218	1.1832218	1.1832218	1.1832218	1.1832218
Phase-1 RCT-40	0.987184	0.9763561	0.8978908	0.8128642	0.7882633	0.7722827	0.77595866	1.1240499	1.0416205	1.0416205	1.0416205	1.0416205	1.0416205	1.0416205
Semaphorin marker protein-30	0.9056241	0.7703719	0.9045436	0.8903314	1.1107666	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945
Cyclin G	1.091125	1.223063	1.094315	1.054246	0.82847357	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945
Melanoma-associated antigen ME491	1.2499882	1.1405322	1.2807352	0.9919108	0.9094441	1.016278	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945
Phase-1 RCT-28	1.1775948	0.9355209	0.98812544	0.9402435	0.40620962	0.9637108	1.145178	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945
Alcohol dehydrogenase 1	0.7061685	0.56430658	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435	0.9402435
JNK1 stress activated protein kinase	1.0282016	0.8448905	1.0418658	0.7159366	0.8657108	1.145178	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945	0.9177945
Protein tyrosine phosphatase alpha	0.8407655	0.8520826	1.047274	1.0231797	1.214508	0.8088236	0.7393726	1.2630837	1.0014797	1.0014797	1.0014797	1.0014797	1.0014797	1.0014797
Phase-1 RCT-55	1.0062453	1.2045553	1.5779655	0.8353063	1.115457	0.9038845	1.1947862	1.0233783	0.9325291	0.9325291	0.9325291	0.9325291	0.9325291	0.9325291
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.77756306	0.83389297	0.9874579	0.8972662	0.84853023	0.95052344	1.0054576	1.0167544	0.989472	0.989472	0.989472	0.989472	0.989472	0.989472
DNA topoisomerase I	0.8387802	0.9348186	1.1185626	0.85192513	0.9813798	0.9151466	0.8657102	0.8617974	1.1630039	1.1630039	1.1630039	1.1630039	1.1630039	1.1630039
Phase-1 RCT-280	1.0218712	1.1429276	0.8652598	1.0053462	1.0177286	1.1412182	0.9327606	1.1380948	0.9825956	0.9825956	0.9825956	0.9825956	0.9825956	0.9825956
Superoxide dismutase Mn	1.0217282	0.9764357	0.9188979	0.98817026	1.0945923	1.1759368	1.210169	1.0883915	1.362031	1.362031	1.362031	1.362031	1.362031	1.362031
Beta-tubulin, class I	1.4178652	0.993313	1.0766425	0.808306	0.8210889	0.8369234	0.994485	0.9830186	1.3110378	1.3110378	1.3110378	1.3110378	1.3110378	1.3110378
Diacylglycerol kinase zeta	0.9525634	0.7824724	0.8080893	1.0702984	0.9654533	1.0622809	0.83417885	0.8555407	1.280874	1.280874	1.280874	1.280874	1.280874	1.280874
Carbamyl phosphate synthetase I	0.9159514	1.1050771	1.0361484	1.1151773	0.9334833	0.8817153	1.1463512	0.95046393	0.95096555	0.95096555	0.95096555	0.95096555	0.95096555	0.95096555
Phase-1 RCT-141	1.416328	1.2884331	1.8745162	1.034142	0.8488229	0.8116271	0.938877	0.8534997	1.1407205	1.1407205	1.1407205	1.1407205	1.1407205	1.1407205
14-3-3 zeta	1.5070945	1.1075889	1.0627193	1.0327682	0.9628457	1.0311359	0.938877	0.8534997	1.1407205	1.1407205	1.1407205	1.1407205	1.1407205	1.1407205
Gammagamma-cytoplasmic	0.98077034	1.3061948	1.4726994	0.8623606	0.9251219	1.0221624	0.9755697	1.5171479	0.9303943	0.9303943	0.9303943	0.9303943	0.9303943	0.9303943
Ribosomal protein L13A	0.82404274	1.0075092	1.0514439	0.95526644	0.8251219	0.9755697	0.8684095	0.9680229	1.3356216	1.3356216	1.3356216	1.3356216	1.3356216	1.3356216
Phase-1 RCT-65	1.0514884	1.0479249	1.2152191	1.4472709	1.0956339	0.9770911	1.124682	1.0067432	1.339109	1.339109	1.339109	1.339109	1.339109	1.339109
Cdkn	1.0907642	1.2735114	1.0338281	1.3020523	1.1935297	0.9770911	1.124682	1.0067432	1.339109	1.339109	1.339109	1.339109	1.339109	1.339109
Protein O-mannosyltransferase 1 (Pant1)	1.1043752	1.214551	1.1350361	1.2505432	0.9776549	1.0343716	1.0981004	1.17672663	1.5817039	1.5817039	1.5817039	1.5817039	1.5817039	1.5817039
HMG CoA reductase	0.97888036	0.908823	0.9263841	0.7233337	0.80322816	1.045074	1.1348927	1.067081	1.1742247	1.1742247	1.1742247	1.1742247	1.1742247	1.1742247
Interferon related developmental regulator (IFRD1)	0.8617997	0.961797	0.9356191	0.82420676	0.8835148	1.0583106	1.0012021	0.9867023	1.0330032	1.0330032	1.0330032	1.0330032	1.0330032	1.0330032
Phase-1 RCT-12	0.9831772	0.9095905	1.0439614	1.1902914	0.97066877	0.6318749	1.0416102	1.0051893	1.1008086	1.1008086	1.1008086	1.1008086	1.1008086	1.1008086
Glucose-regulated protein 78	0.8511892	1.2238013	1.506497	1.155736	0.882825	0.59863865	0.807769	0.75728476	0.91428226	0.91428226	0.91428226	0.91428226	0.91428226	0.91428226
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.90235937	1.0252222	1.046708	0.9365027	1.038205	0.9281053	0.75570516	0.84208685	1.1303773	1.1303773	1.1303773	1.1303773	1.1303773	1.1303773
Caspase 6	1.0118423	1.1012442	1.0864149	1.0585673	1.041405	1.092884	1.0303843	1.0817986	1.072487	1.072487	1.072487	1.072487	1.072487	1.072487
Phase-1 RCT-169	0.95874324	1.1302775	1.0221608	1.1331176	1.032253	0.7711417	0.850456	0.7718146	0.84985275	0.84985275	0.84985275	0.84985275	0.84985275	0.84985275
Phase-1 RCT-197	1.07618	1.031227	1.0388139	1.105129	1.0966333	0.9833316	1.05474	0.9455814	1.4460373	1.4460373	1.4460373	1.4460373	1.4460373	1.4460373
Phase-1 RCT-34	1.0704718	1.1493608	0.8901727	1.1991684	1.43869	1.0535649	1.43869	1.0535649	1.0674654	1.0674654	1.0674654	1.0674654	1.0674654	1.0674654

Table 28

1.1255112	1.0515412	0.986827	0.98971993	1.0347659	0.9665336	0.97472435	0.97072198	0.98554896	0.7432061	0.7932053	1.0608312	0.6904089
2.5902922	1.1417011	1.1094257	0.95163478	1.1094257	0.95163478	1.1094257	0.95163478	1.1094257	0.95163478	1.1094257	0.95163478	1.1094257
0.5320292	0.9691141	0.9932625	0.9570532	0.97971021	0.97971021	0.97971021	0.97971021	0.97971021	0.97971021	0.97971021	0.97971021	0.97971021
0.98004855	1.139637	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053	0.97137053
1.0507091	1.1097152	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615	0.97011615
1.1659188	1.0519007	0.78931105	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139	0.87572139
1.0457919	1.0533344	0.87123566	0.96591804	0.93434017	0.93434017	0.93434017	0.93434017	0.93434017	0.93434017	0.93434017	0.93434017	0.93434017
0.97007894	1.1846783	1.0965884	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711	0.9268711
0.90097894	1.0952901	1.1101477	1.2800537	1.0037398	1.0037398	1.0037398	1.0037398	1.0037398	1.0037398	1.0037398	1.0037398	1.0037398
0.9207694	1.0585648	1.2617631	1.0415757	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595
0.8070866	1.0585648	1.2617631	1.0415757	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595	0.8444595
0.9994241	1.0048711	0.9794566	0.91879506	0.9426738	0.9426738	0.9426738	0.9426738	0.9426738	0.9426738	0.9426738	0.9426738	0.9426738
0.84103664	1.0043569	1.006816	1.1634498	1.080892	1.080892	1.080892	1.080892	1.080892	1.080892	1.080892	1.080892	1.080892
1.105071	1.0377443	0.94132556	1.1174009	1.1243502	0.98655055	1.0282164	0.9718731	0.88946605	0.9397227	1.1571089	0.9124413	0.90800105
1.1073005	0.9575447	0.82609147	0.8569445	1.1243502	0.98655055	1.0282164	0.9718731	0.88946605	0.9397227	1.1571089	0.9124413	0.90800105
0.885586	0.9353372	1.0596721	0.8869789	1.080179	0.9207587	0.9523375	0.9671427	0.9671427	0.9671427	0.9671427	0.9671427	0.9671427
1.2716737	0.9594134	0.9723171	1.0463302	1.050498	0.9028927	0.9523375	0.9671427	0.9671427	0.9671427	0.9671427	0.9671427	0.9671427
1.2216717	1.0438856	0.9320219	1.0283372	1.140475	1.1368596	0.9459148	0.985945	1.113726	0.91009118	1.096218	0.98551612	0.93151055
1.0716922	1.0895349	0.9599479	1.1394405	0.93116023	0.9915924	1.0251202	0.9895129	0.9895129	0.9895129	0.9895129	0.9895129	0.9895129
1.0716922	1.08951154	0.96552477	0.7890005	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064
1.0716922	1.08951154	0.96552477	0.7890005	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064	0.9580064
0.95660764	1.0821017	0.99913578	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
MHC class II antigen RT1.A10 alpha-chain												
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732
1.0746946	0.8374215	0.99137008	1.0271875	0.9034732	0.9034732	0.9034732	0.9034732	0.9034732	0.90			

Table 28

Organic cation transporter 3	0.83559895	0.99687153	1.0613657	0.8717553	0.97960794	0.82546043	0.97237388	1.0280194	0.94732837	1.00280633	1.0522375	1.0782694	1.7623452	1.5655185
Hypoxia-inducible factor 1 alpha	1.38358891	1.1361456	1.0831327	0.98175927	0.9520586	1.1228304	1.0584278	1.0173577	0.9849575	0.79887685	0.85780054	1.0928619	0.9515307	1.6740858
Phase-1 RCT-43	0.97141445	0.9509985	1.0609464	0.92286643	1.0415969	0.82324287	0.97154737	0.8605688	1.1834539	1.2603386	0.95253825	1.180338	1.0027952	0.652647
Phase-1 RCT-45	1.1302125	1.1040598	1.2845353	1.1742013	1.0744708	0.96226245	1.0078584	0.9547071	1.0808234	0.9754869	0.7411101	1.3209688	1.3041979	1.0019686
Malate dehydrogenase, cytosolic	0.9029455	0.8872101	0.9063265	1.0467836	1.0026248	1.0853682	0.9723481	1.0236126	1.0954968	1.225113	1.1820728	0.67070204	0.9481764	2.2707787
VL30 element	1.2346878	1.3037267	1.2093866	0.68746114	1.0117295	2.9505298	1.7437306	1.751105	1.0395871	0.86067855	1.0817927	1.036571	1.4082926	2.1034048
Phase-1 RCT-189	0.96145666	0.7453764	0.8703954	0.8014326	0.8960895	1.2471728	1.0180426	1.0415922	1.2246386	1.1464561	1.175968	1.0538952	1.5004895	1.6872063
Alpha-fetoprotein	0.9438725	0.8461674	0.9170301	0.6893775	0.9240711	1.0724972	0.9054167	0.9054167	0.96021713	0.88041218	0.78314435	0.950225	1.4066562	2.0060618
Calgranulin B	1.0078408	0.87652504	1.1022514	0.82853516	0.99177843	0.97876347	0.98836894	1.1211813	0.9410944	0.94378	1.0069605	0.93000376	1.0410918	0.95121306
Tissue plasminogen activator	0.9700289	0.91343904	0.9488666	1.0818069	1.0216123	0.97876347	0.9091047	0.9726788	1.042815	0.984378	1.0069605	0.93000376	1.0410918	0.95121306
Phase-1 RCT-195	0.9205608	0.832044	1.412212	0.78397584	1.0391771	0.9886645	0.9091047	1.1214213	0.9410944	0.94378	1.0069605	0.93000376	1.0410918	0.95121306
Liver fatty acid binding protein	0.9742871	0.80167385	1.0960603	0.86351997	0.9685481	1.0557092	0.9185067	0.9185067	1.1214213	0.9410944	0.94378	1.0069605	0.93000376	1.0410918
Alpha-1 microglobulin/bikunin precursor (Arip)	1.0131877	1.013942	1.0118271	1.204069	0.96370866	1.0433955	0.9818377	0.823399	0.957958	0.92069523	0.7502413	0.74583334	1.0787366	0.7655599
Phase-1 RCT-284	1.087951	1.0283045	1.0351616	1.135528	1.0017313	0.9883153	0.9883153	0.9617409	0.9464821	0.77393934	0.7615196	1.5366904	1.4895729	1.781124
Phase-1 RCT-151	1.1122077	1.1215975	1.2071173	0.85983746	0.9508656	0.9505726	0.8388576	0.7638605	1.0384121	1.355934	1.029793	1.2387897	1.1090978	1.215436
Phase-1 RCT-221	0.8543759	0.8909156	0.8598676	0.8670206	0.9035988	0.9548924	1.0042228	0.92716354	1.1598161	1.2761374	1.1929783	1.2387897	1.1090978	1.215436
Phase-1 RCT-235	1.0307869	1.0181113	0.9508949	0.8096582	1.2061173	0.9491744	1.0560342	0.8905738	0.8114621	0.96590357	1.1403015	0.8598538	0.8994216	0.92636
Organic anion transporter 3	1.0215379	1.064139	1.1204358	1.0842026	1.1142659	1.1589711	0.96702945	1.0406342	1.0934616	0.9488756	1.1787173	0.89020824	1.0964856	1.2098836
Malic metalloproteinase-1	0.80821314	0.5359705	1.0624208	0.8209255	0.95404184	0.83803904	0.80924827	0.8097714	0.59342285	0.6247754	0.7797665	0.8769427	2.0471814	2.6209462
Urinary protein 2 precursor	1.0348009	1.0131453	1.0594159	0.9069422	1.0486423	1.207818	1.146252	1.1241823	0.94406484	0.9722207	0.958231	1.046214	0.81557184	0.7014004
Phase-1 RCT-212														
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=ncr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 18 and as included in Table 28)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)

Phase-1 RCT-32	0.9765954	0.8935356	1.0687232	0.5271179	0.7256464	0.62963914	1.0164817	1.0477551	1.2943927	1.0755236	1.0185945	1.3141589	0.9188876	1.0502914
Periodic assembly factor 1	1.141516	1.0456965	1.3317791	0.995773	0.9693964	0.9715021	0.9649749	1.0767323	0.7910766	0.8352303	1.441675	1.151111	1.2769445	1.076412
9-oxoanthine DNA glycosylase	1.114129	1.0104282	0.9752234	0.9683616	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275	0.8659275
Phase-1 RCT-42	0.99012023	1.0227041	0.9167779	0.9452384	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897	0.7474897
Helix F/G	0.6979404	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702	0.7781702
Phase-1 RCT-184	0.8098623	0.8230656	0.9628176	0.9527796	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914	0.91579914
Phase-1 RCT-188	0.70309716	0.7184438	0.91460824	0.6079588	0.75655428	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393
Phase-1 RCT-119	0.5685615	0.70779637	0.4442278	0.6079588	0.75655428	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393	0.72309393
Carbonic anhydrase II	1.0207461	1.1881438	0.8492098	0.93617713	0.8633026	1.0087091	0.8633026	0.8633026	0.8633026	0.8633026	0.8633026	0.8633026	0.8633026	0.8633026
Cytochrome P450 2E1	0.78154035	1.216895	0.7946368	1.0855227	1.0740751	1.0530945	0.8214706	0.8214706	0.8214706	0.8214706	0.8214706	0.8214706	0.8214706	0.8214706
Phase-1 RCT-71	1.183565	1.329399	0.6480033	0.9510436	1.162711	1.1304893	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644
Phase-1 RCT-179	1.183565	1.329399	0.6480033	0.9510436	1.162711	1.1304893	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644
Phase-1 RCT-161	1.2623533	1.2073402	0.8421533	0.7273287	0.6891153	0.73278506	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644	0.6307644
Phase-1 RCT-207	1.5319546	1.3857867	1.3565191	1.565766	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839
Phase-1 RCT-144	1.045893	1.0256572	1.4272888	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839	1.3024839
Phase-1 RCT-225	1.8437133	1.756609	1.5543659	1.3771476	1.2915497	0.6589124	0.6589124	0.6589124	0.6589124	0.6589124	0.6589124	0.6589124	0.6589124	0.6589124
Cytochrome P450 2E1	0.68971435	0.94885576	0.81940557	0.6187162	0.8273657	0.631065	0.7051388	0.7051388	0.7051388	0.7051388	0.7051388	0.7051388	0.7051388	0.7051388
ID-1	1.3212638	1.1135905	1.2173277	1.08379	1.0959654	1.0878427	1.0959654	1.0959654	1.0959654	1.0959654	1.0959654	1.0959654	1.0959654	1.0959654
Thioredoxin-1 (Trx1)	0.78709346	0.73957916	0.9447732	1.1120336	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528	0.8840528
Carbonic anhydrase III	0.6906669	0.63346505	0.4965585	0.7678028	0.2984594	0.40362492	0.1811588	0.1811588	0.1811588	0.1811588	0.1811588	0.1811588	0.1811588	0.1811588
Phase-1 RCT-140	1.0642251	1.1594596	1.0911108	1.0655617	1.0959074	1.0047368	0.9793972	0.9793972	0.9793972	0.9793972	0.9793972	0.9793972	0.9793972	0.9793972
Complement component C3	0.61330146	0.9074983	0.6881487	1.4177658	0.66432405	0.5565313	0.7449023	0.7449023	0.7449023	0.7449023	0.7449023	0.7449023	0.7449023	0.7449023
Glucokinase	0.83632565	0.6607308	0.43052658	0.8838354	0.6675334	0.8268461	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724
Phase-1 RCT-173	0.8979192	1.0363506	0.8802899	1.7224272	1.3169551	0.8268461	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724	0.6509724
3-methyladenine DNA glycosylase	1.0814316	1.0616934	1.042819	1.0657517	1.0570951	0.7705255	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915
Perisomal multifunctional enzyme type II	0.7015513	0.7502904	1.0430382	0.7705255	0.9744915	0.7705255	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915	0.9744915
Sensinase marker protein-30	0.6229137	0.6459498	0.6521928	0.7296557	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737	0.70675737
Cyclin G	0.7016906	0.82055483	0.9557829	0.30052517	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524	0.45929524
Melanoma-associated antigen ME-401	2.723597	2.065647	1.8839618	0.8291581	0.9702941	1.0242551	0.9204935	0.9204935	0.9204935	0.9204935	0.9204935	0.9204935	0.9204935	0.9204935
Phase-1 RCT-28	1.050204	0.9050299	0.6065819	0.9424185	1.0615402	1.0297829	0.9271916	0.9271916	0.9271916	0.9271916	0.9271916	0.9271916	0.9271916	0.9271916
Ererin	0.8109528	0.7032518	1.268672	1.1103119	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274	0.6068274
Alcohol dehydrogenase I	0.9345752	0.74251676	0.61723856	0.86056874	1.1674065	1.0275316	0.674065	0.674065	0.674065	0.674065	0.674065	0.674065	0.674065	0.674065
Stem cell factor	1.1184781	1.1073128	1.0483415	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316	1.075316
Protein kinase C- δ	0.95936024	0.9939812	0.9803617	1.0404183	1.1585383	1.0314526	0.7500766	0.7500766	0.7500766	0.7500766	0.7500766	0.7500766	0.7500766	0.7500766
Phase-1 RCT-55	1.0578318	1.0162641	0.7379781	1.1892324	1.3187292	0.64291155	0.7267783	0.7267783	0.7267783	0.7267783	0.7267783	0.7267783	0.7267783	0.7267783
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.7523254	0.7558974	0.8560351	1.0547451	0.7431991	0.80933881	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079
DNA topoisomerase I	1.060417	1.1102597	0.7615128	0.78344357	1.132078	0.80933881	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079	0.8680079
Superoxide dismutase Mn	1.0707496	0.94872206	1.3575883	1.2195306	0.8971136	0.92172886	1.1136973	1.0944594	0.6795336	0.6795336	0.6795336	0.6795336	0.6795336	0.6795336
Beta-tubulin, class I	1.1647443	1.0264555	0.3957071	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811	1.0902811
Carbamyl phosphate synthetase I	0.41882687	0.8768513	0.99973106	1.2055864	1.027365	0.8250342	1.0937352	1.124686	0.9385816	0.9385816	0.9385816	0.9385816	0.9385816	0.9385816
Phase-1 RCT-141	0.8889487	0.8965686	1.0170379	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008	0.9673008
14-3-3 zeta	0.39256	0.4703287	0.5522875	1.7482532	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034	1.0943034
Gammacellin, cytoplasmic	0.80546594	0.8047739	1.1515516	1.233737	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378	1.0434378
Ribosomal protein L13A	0.8697594	1.502033	1.6688019	1.2830735	1.0583618	1.1322946	0.92644954	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415
IL-8	1.5655599	1.502033	1.6688019	1.2830735	1.0583618	1.1322946	0.92644954	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415	1.1290415
Phase-1 RCT-65	2.3511446	1.4556346	1.5298328	1.6097975	1.3391966	1.2085371	1.2163248	1.0891458	0.88026166	0.88026166	0.88026166	0.88026166	0.88026166	0.88026166
c-Jun	2.9379619	1.9554826	1.2118154	1.851129	1.1381216	1.1273929	0.75623245	1.1538911	0.9533246	0.9533246	0.9533246	0.9533246	0.9533246	0.9533246
Protein O-mannosyltransferase 1 (Pom1)	1.8648074	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711	1.5899711
HMG CoA reductase	1.3167604	1.2147846	1.575243	1.1880569	0.95486673	1.0621802	1.0293598	0.70430505	0.79875267	0.79875267	0.79875267	0.79875267	0.79875267	0.79875267
Interferon-related developmental regulator FRD1 (PC4)	0.82658255	0.8141601	0.8941427	1.5680272	1.1251776	1.3328298	1.3681786	1.0543568	1.2231307	1.2231307	1.2231307	1.2231307	1.2231307	1.2231307
Glucose-regulated protein 78	0.5697088	0.5681722	1.0622331	0.9535353	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717	0.96004717
3-ketohydroxyacid dehydrogenase (HSD3B1)	0.87763133	0.90688107	0.93843905	0.5897421	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285	0.85254285
Caspase-6	1.0713523	1.0369905	1.1597272	1.2146997	1.3017819	1.2252591	1.327765	1.338557	1.338557	1.338557	1.338557	1.338557	1.338557	1.338557
Phase-1 RCT-169	1.1969887	0.96553868	0.8198591	1.0246239	0.9604001	0.87685265	1.4113702	1.2170441	1.0568763	1.0568763	1.0568763	1.0568763	1.0568763	1.0568763
Phase-1 RCT-187	1.4282553	1.2697275	1.3312808	1.0529103	1.0711221	1.173303	1.2233564	1.2439715	1.4957703	1.4957703	1.4957703	1.4957703	1.4957703	1.4957703
Phase-1 RCT-34	1.4310659	1.2971586	2.2257657	1.6183391	1.1257181	1.6556021	1.8065669	0.9728746	0.96576246	0.96576246	0.96576246	0.96576246	0.96576246	0.96576246

Table 28

Phase-1 RCT-72	0.96981623	1.3251092	0.8330981	1.2209158	1.0102443	1.015947	0.97895826	1.4454983	1.0443256	0.80035533	1.172727	1.1287836	1.1589708	0.87906968
Pyruvate kinase, muscle	0.9783188	1.0239805	0.98245384	1.310553	1.1250804	1.2851156	1.438451	1.125862	1.0220395	1.152401	1.4635867	1.3940432	2.3148333	0.7132072
Phase-1 RCT-288	0.60301095	0.5888971	0.9625559	0.5677635	0.8405039	0.7306338	0.7603504	1.803731	1.0219181	1.0682901	0.855158	0.8662157	0.9510344	0.7291372
Phase-1 RCT-30	1.1236956	1.0731449	0.99478884	1.0310557	0.8741344	0.9442335	0.9837377	1.202184	0.9572737	0.9873275	0.92549645	1.250218	0.8602662	0.5020863
Choline P450 2C39 (alternat clone 2)	0.5659597	0.6020282	0.77618197	0.7578981	0.7161917	0.9432698	0.8172263	1.8166042	0.6046824	0.8422943	0.9453555	0.9565333	0.9500643	0.8922048
Phase-1 RCT-361	1.0438932	0.7668247	0.4768247	1.5517427	0.6798981	1.0149368	0.8631498	1.4712263	1.157268	0.7827646	2.8500656	2.9684836	0.9622019	0.8317089
Phase-1 RCT-41	1.1087527	1.116053	0.89065087	1.1847367	0.7130286	0.8742487	0.8812345	0.7423005	0.88753976	1.0697351	0.9266617	0.556148	0.8264522	1.5688987
Methylglut-CoA isomerase alpha	0.86983736	1.024867	0.4768247	1.1847367	0.7130286	0.8742487	0.8812345	0.7423005	0.88753976	1.0697351	0.9266617	0.556148	0.8264522	1.5688987
Cytochrome P450 1A2	0.7715262	0.9437113	1.0849636	0.86728363	1.0542787	1.0513636	0.8069537	1.03884	1.0271416	1.1085569	1.189798	1.520702	0.9817659	0.91188015
Phase-1 RCT-297	1.1521559	0.87104374	1.0862836	1.4339283	0.8663087	1.1271632	0.71075433	1.0953474	0.8716727	0.8014291	1.1770385	1.3949212	2.2414145	1.1188015
Monoclonal oxidase B	0.62059775	0.6870812	0.8515048	0.8816308	1.0934503	1.031484	0.9122272	0.8476727	0.9765774	1.0655079	1.1754947	0.88257654	0.537784	0.8231503
Phase-1 RCT-284	0.74591516	0.6276892	0.84085524	0.8148429	1.0465931	0.91623165	0.9765774	1.0655079	0.8761183	0.8604389	0.7574957	0.6687083	0.6534976	0.74594208
Peroxisome proliferator activated receptor gamma	1.30690945	1.3343982	1.4336195	1.2041274	0.8344503	1.04949	0.9426634	1.3222735	0.8624133	0.8624133	1.0655079	1.1754947	0.88257654	0.537784
Phase-1 RCT-143	0.7648939	0.7733607	0.82025168	0.8661556	0.8654708	0.9519178	0.9519178	1.0555063	0.9519178	1.0555063	0.9519178	1.0555063	0.9519178	1.0555063
Phase-1 RCT-251	1.1038234	1.2339924	1.3212848	0.5463464	1.0712635	0.9519178	0.9519178	1.0555063	0.9519178	1.0555063	0.9519178	1.0555063	0.9519178	1.0555063
Glutathione S-transferase theta-1	1.1376265	0.9112859	1.1771414	1.1187601	0.9976508	0.8948766	0.8175717	0.938108	0.9273949	0.8545014	0.78733015	0.7997676	0.7997676	0.7997676
Phase-1 RCT-41	0.84276175	0.8182798	0.8016678	1.012001	0.9029068	0.9067225	0.9067225	0.9067225	0.9067225	0.9067225	0.9067225	0.9067225	0.9067225	0.9067225
Phase-1 RCT-148	0.7516633	0.82975745	0.82010514	1.0430917	1.0063423	1.2136445	1.0718691	0.8891717	0.8891717	0.8891717	0.8891717	0.8891717	0.8891717	0.8891717
Phase-1 RCT-142	1.2533696	1.3600518	1.4344555	1.0929235	1.1568772	0.9653994	1.141398	1.028123	0.928123	0.928123	0.928123	0.928123	0.928123	0.928123
Activator receptor type II	0.82768077	0.7827063	0.4783095	1.422604	1.427812	1.204472	1.1888279	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579
Glycine methyltransferase	1.0438932	0.7827063	0.4783095	1.422604	1.427812	1.204472	1.1888279	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579
Phase-1 RCT-281	1.0038932	0.7827063	0.4783095	1.422604	1.427812	1.204472	1.1888279	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579	1.5319579
Ciliary neurotrophic factor	1.00235	1.0913272	0.9733083	1.1524942	1.0300063	0.9727226	0.9727226	0.9727226	0.9727226	0.9727226	0.9727226	0.9727226	0.9727226	0.9727226
Gap junction membrane channel protein beta 1 (Gjb1)	1.4520847	1.670027	1.2591898	1.17787	1.0034227	1.131621	0.9400247	1.511387	1.069719	1.277442	1.1175415	1.0791687	1.0683111	1.3498721
Phase-1 RCT-98	1.111195	1.098801	0.9566587	1.1647955	1.3920116	1.057258	1.0335135	0.6366562	1.0297145	0.6787764	1.0211611	0.6578618	1.1453781	0.7132072
Phase-1 RCT-287	0.6799559	0.8218008	0.9722557	0.7707793	0.9268881	1.050528	0.9631942	1.182728	1.1467422	1.2840513	0.850052	0.9427435	1.0710558	1.2319392
Retinol-binding protein (RBP)	0.6777509	0.7206643	0.97300464	0.5631312	0.7427087	0.9068068	1.19427	0.5894845	0.69809324	0.70517548	0.7180229	0.6274848	0.830657	1.0971389
Very long-chain acyl-CoA synthetase	0.6126758	0.6996933	0.8924961	0.5178282	0.8317078	0.9809095	0.950961	1.306127	1.3847818	1.1826556	1.1231556	0.8315652	1.0412644	0.9551895
Syndecan-1	0.823517	0.7252936	1.073365	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418
Stathmin	0.99488814	0.9722936	1.073365	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418	0.9583418
Phase-1 RCT-145	1.0146587	0.861242	1.3707421	0.8624117	1.1147068	1.1613619	1.130874	1.0381336	1.2687154	1.0188274	1.1894534	0.94520295	0.84118654	0.7132072
Phase-1 RCT-89	0.70116514	0.8088664	0.6738975	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155	0.7889155
Sarcoplasmic reticulum calcium ATPase	0.81933045	0.91054845	0.9407387	1.0431494	0.9994877	1.0213064	0.9494547	0.8360543	0.74255515	0.6330744	0.6330744	0.6330744	0.6330744	0.6330744
Alpha-2-macroglobulin, sequence 2	0.60837245	0.7243561	0.6533154	1.1841588	1.0875273	1.1136976	1.1515889	0.752405	0.8263848	0.7336202	0.7517352	0.8389691	0.7402446	1.145716
Phase-1 RCT-204	1.0048233	0.9917453	0.8197809	0.93221736	0.9485528	0.9514857	0.93743455	0.8564882	0.9297868	0.8856697	0.8716339	0.8319551	0.9047115	1.0613554
Vascular endothelial growth factor	0.9210019	1.0894557	1.0181059	1.232579	1.1143333	1.0733064	1.01696715	1.1249114	1.0750198	1.0464628	0.900285	1.0562637	0.9027808	0.7762065
NAD(P)-dependent isocitrate dehydrogenase, cytosolic	0.66397125	0.69811296	0.93944216	0.6731242	0.85180174	0.865945	0.7618873	1.0742916	1.0506075	1.1625873	0.8700033	0.8569457	0.88153005	0.7718066
DNA binding protein inhibitor I02	0.9744039	0.71720566	1.3218611	1.0271237	0.8167857	0.993494	0.8743748	1.2445778	0.97332734	0.9463641	0.83224936	0.57443353	0.5897776	1.4791478
Glutathione S-transferase Ye	0.5968254	0.7380294	1.422342	0.7078739	1.014282	1.1212895	0.9306017	0.40884784	0.557287	0.4733658	0.36544788	0.4867188	0.4295157	0.4384533
Epoxide hydrolase	0.8862233	1.0426985	1.4567034	0.9075008	1.1397141	1.0073879	0.8960568	0.8709178	0.3619018	0.77403253	1.7215178	1.3516474	1.1058848	0.7630059
Insulin-like growth factor I	0.6110028	0.6483654	0.95551097	0.3904062	0.7515592	0.1053443	0.715371	0.873808	0.9943676	1.1676702	0.9036402	1.00528	0.81827474	0.8206819
Proteinase H synthase	0.90953875	0.9118898	1.0112214	1.538016	0.8003065	0.8431293	0.715371	0.873808	0.9943676	1.1676702	0.9036402	1.00528	0.81827474	0.8206819
Phase-1 RCT-136	0.8642612	0.8094587	0.91958076	1.2589551	1.0150054	1.1410254	1.0886618	0.9502722	0.976684	0.9281422	0.8206202	0.7690884	0.8458243	0.9050988
Phase-1 RCT-137	0.61840427	0.6668874	0.6924071	0.58954755	0.8066044	0.7472117	0.92534447	0.45933366	0.5041655	0.5154074	0.5088769	0.4952837	0.47308818	1.0544438
Phase-1 RCT-138	0.8139114	0.78838707	0.7287646	0.991785	1.0206772	1.033616	0.89411646	0.95941397	1.1484233	0.8435336	0.8435336	1.045288	1.103622	0.9515151
Hepatic lipase	0.6182489	0.6378238	0.6541856	0.7407295	1.0206772	1.033616	0.89411646	0.95941397	1.1484233	0.8435336	0.8435336	1.045288	1.103622	0.9515151
Phase-1 RCT-164	0.6581665	0.7307768	0.8509149	0.75147873	0.93522834	1.0635113	1.1314416	0.7091842	1.8161801	1.7984908	0.8217947	0.7328746	0.6958468	1.1478527
Acyl-CoA dehydrogenase, medium chain	0.6981665	0.7307768	0.8509149	0.75147873	0.93522834	1.0635113	1.1314416	0.7091842	1.8161801	1.7984908	0.8217947	0.7328746	0.6958468	1.1478527
Glutathione S-transferase Y02 subunit	1.4633801	1.2708721	1.6482659	1.0683833	1.109268	1.200127	1.0233026	0.86782313	0.81622313	0.81622313	0.81622313	0.81622313	0.81622313	0.81622313
Carbonyl reductase	1.2387751	1.5408737	1.4489731	1.2528102	1.18512	1.286607	1.1831788	0.8927305	0.97677295	0.97677295	0.97677295	0.97677295	0.97677295	0.97677295
Phase-1 RCT-166	1.1702813	1.0887737	1.2450941	0.8487852	1.043824	1.0300605	1.0093303	1.095518	1.0200766	1.241116	0.9592509	1.1648848	0.9087308	0.9595391
Apolipoprotein E	0.7743144	0.6881282	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966
UDP-glucuronosyltransferase	0.7743144	0.6881282	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966	0.7333966
Glutathione S-transferase P1	1.048242	0.8791939	1.0558283	0.8047586	0.8545744	0.9517893	0.924238	1.3464106	1.2405957	1.388057	1.062414	1.088387	1.2957633	1.5228862
Disulfide isomerase related protein (ERp72)	0.624658	0.80509104	1.0645953	0.9130034	0.7276884	0.8683835	0.91053768	0.961932	1.3666005	1.1474583	0.6311747	0.8345862	0.68925408	1.055658
Ribosomal protein L13	0.8981129	0.82707185	0.83557534	0.9649488	0.9178784	0.7831088	0.891138	1.9822281	1.613841	1.390434	1.0236472	0.881807	0.8448622	0.7014891
Cendinadin	0.6346778	0.7050508	0.8372529	1.4016721	0.7563836	0.6796877	0.969889	1.0273452	1.117193	0.8304262	0.708528	0.81327564	1.743281	0.81327564
Inter-alpha-inhibitor 14 heavy chain (Ii14														

Phase-1 RCT-3	1.1004384	1.1501107	0.9496511	1.0568112	1	0.8821086	0.9862024	1.1871992	1.1815919	1.3481363	1.2524936	1.2318784	1.5490088	0.92364776
Felun beta (Fetus)	1.442075	1.1813881	0.9745709	1.036632	1.2651214	1.2140459	0.92012227	0.6341905	0.9040584	0.8703001	0.8389441	0.7721248	0.8076151	0.78244
3-hydroxybutyrate dehydrogenase	0.76146916	0.83943584	0.779285	0.779285	0.779285	0.884004	0.884004	0.884004	0.884004	0.884004	0.884004	0.884004	0.884004	0.884004
Carbonic anhydrase III, sequence 2	0.8535327	0.8974457	0.6406056	0.6346129	0.6346129	0.98946077	0.98946077	0.98946077	0.98946077	0.98946077	0.98946077	0.98946077	0.98946077	0.98946077
Phase-1 RCT-10	0.68178403	0.7636202	0.74877095	0.8675251	0.8675251	0.9189545	0.9189545	0.9189545	0.9189545	0.9189545	0.9189545	0.9189545	0.9189545	0.9189545
Alpha-2-macroglobulin	0.646948	0.89024235	0.6539881	0.24538724	0.24538724	0.8065738	0.8065738	0.8065738	0.8065738	0.8065738	0.8065738	0.8065738	0.8065738	0.8065738
Dynactin-1 (D100)	0.8979196	0.9604158	0.7104977	0.75078726	0.75078726	0.89091105	0.89091105	0.89091105	0.89091105	0.89091105	0.89091105	0.89091105	0.89091105	0.89091105
Lysyl oxidase	1.2238672	1.20926	0.9300742	1.2238672	1.2238672	1.1308886	1.1308886	1.1308886	1.1308886	1.1308886	1.1308886	1.1308886	1.1308886	1.1308886
Phase-1 RCT-252	0.4549	0.55226066	0.40326636	0.647057	0.647057	1.4641013	1.4641013	1.4641013	1.4641013	1.4641013	1.4641013	1.4641013	1.4641013	1.4641013
Phase-1 RCT-29	0.97870624	1.0422392	0.9043128	1.0171836	1.0171836	1.0017033	1.0017033	1.0017033	1.0017033	1.0017033	1.0017033	1.0017033	1.0017033	1.0017033
Phase-1 RCT-278	0.91143924	0.9746474	0.8749563	0.801688	0.801688	0.989008	0.989008	0.989008	0.989008	0.989008	0.989008	0.989008	0.989008	0.989008
Phase-1 RCT-25	0.852511	0.893437	0.9508555	0.9440434	0.9440434	1.2284882	1.2284882	1.2284882	1.2284882	1.2284882	1.2284882	1.2284882	1.2284882	1.2284882
Cytochrome P450 2C11	1.1433772	1.0146345	0.7590536	0.2483512	0.2483512	0.7128711	0.7128711	0.7128711	0.7128711	0.7128711	0.7128711	0.7128711	0.7128711	0.7128711
Phase-1 RCT-202	0.79168828	0.8221577	1.0404505	0.8226977	0.8226977	0.77222506	0.77222506	0.77222506	0.77222506	0.77222506	0.77222506	0.77222506	0.77222506	0.77222506
Complement factor 1 (CF1)	0.89560229	0.7143075	0.78658914	1.192825	1.192825	0.830468	0.830468	0.830468	0.830468	0.830468	0.830468	0.830468	0.830468	0.830468
Proliferating cell nuclear antigen gene	0.95599435	1.0392687	1.0753464	1.0323837	1.0323837	1.0562058	1.0562058	1.0562058	1.0562058	1.0562058	1.0562058	1.0562058	1.0562058	1.0562058
Activating transcription factor 3	1.3956531	1.3707942	1.0578353	1.1613007	1.1613007	1.2657187	1.2657187	1.2657187	1.2657187	1.2657187	1.2657187	1.2657187	1.2657187	1.2657187
Focal adhesion kinase (p125FAK)	0.86227465	0.9659454	0.8885785	0.9995065	0.9995065	0.9690066	0.9690066	0.9690066	0.9690066	0.9690066	0.9690066	0.9690066	0.9690066	0.9690066
Phase-1 RCT-289	0.8041027	0.7676383	0.7185335	0.70841634	0.70841634	0.8003491	0.8003491	0.8003491	0.8003491	0.8003491	0.8003491	0.8003491	0.8003491	0.8003491
Phase-1 RCT-289	1.2466689	1.088518	0.9737212	1.168013	1.168013	0.9555508	0.9555508	0.9555508	0.9555508	0.9555508	0.9555508	0.9555508	0.9555508	0.9555508
Iron-responsive element-binding protein	0.72309434	1.1562404	0.8603761	0.8902442	0.8902442	0.93509249	0.93509249	0.93509249	0.93509249	0.93509249	0.93509249	0.93509249	0.93509249	0.93509249
MHC class II antigen RT1 A10 alpha chain	2.1449182	1.4497671	1.8769574	1.8781014	1.8781014	1.2162982	1.2162982	1.2162982	1.2162982	1.2162982	1.2162982	1.2162982	1.2162982	1.2162982
ATM transducer	0.80490274	0.7135035	0.77224684	0.76428035	0.76428035	1.030782	1.030782	1.030782	1.030782	1.030782	1.030782	1.030782	1.030782	1.030782
Phase-1 RCT-171	1.1977684	1.1972357	1.489433	1.2207053	1.2207053	1.0606802	1.0606802	1.0606802	1.0606802	1.0606802	1.0606802	1.0606802	1.0606802	1.0606802
Phase-1 RCT-43	0.8739586	0.8514355	0.703788	0.54415638	0.54415638	0.61425034	0.61425034	0.61425034	0.61425034	0.61425034	0.61425034	0.61425034	0.61425034	0.61425034
Phase-1 RCT-270	0.89059134	0.7446272	0.7107165	0.7343063	0.7343063	0.72205823	0.72205823	0.72205823	0.72205823	0.72205823	0.72205823	0.72205823	0.72205823	0.72205823
Colony-stimulating factor-1	0.89559435	0.8337081	0.9519715	1.0162983	1.0162983	1.008324	1.008324	1.008324	1.008324	1.008324	1.008324	1.008324	1.008324	1.008324
N cadherin	0.96595945	0.9693994	1.0482159	0.9329733	0.9329733	1.071009	1.071009	1.071009	1.071009	1.071009	1.071009	1.071009	1.071009	1.071009
Phase-1 RCT-62	1.2671018	0.9634412	1.8225497	1.9312148	1.9312148	1.0587088	1.0587088	1.0587088	1.0587088	1.0587088	1.0587088	1.0587088	1.0587088	1.0587088
Phase-1 RCT-22	0.84972817	0.8192757	0.88863826	1.29219031	1.29219031	1.0079031	1.0079031	1.0079031	1.0079031	1.0079031	1.0079031	1.0079031	1.0079031	1.0079031
AT-3	1.0481468	1.1145523	0.9902331	1.0097068	1.0097068	1.0246154	1.0246154	1.0246154	1.0246154	1.0246154	1.0246154	1.0246154	1.0246154	1.0246154
Phase-1 RCT-18	0.93389124	1.0472413	0.97038513	0.8542507	0.8542507	0.8303745	0.8303745	0.8303745	0.8303745	0.8303745	0.8303745	0.8303745	0.8303745	0.8303745
Phase-1 RCT-123	1.0321673	1.0694202	0.91825217	0.92885765	0.92885765	0.863676	0.863676	0.863676	0.863676	0.863676	0.863676	0.863676	0.863676	0.863676
Phase-1 RCT-66	0.90790786	0.7978167	0.83735516	0.8739059	0.8739059	0.81413084	0.81413084	0.81413084	0.81413084	0.81413084	0.81413084	0.81413084	0.81413084	0.81413084
Equilibrative nucleoside/nucleoside-sensitive nucleoside transporter	0.79438174	0.748509	0.74642354	0.6538464	0.6538464	0.7441644	0.7441644	0.7441644	0.7441644	0.7441644	0.7441644	0.7441644	0.7441644	0.7441644
Glucose transporter 2	1.021179	0.95448595	1.5267401	0.9396473	0.9396473	1.1550145	1.1550145	1.1550145	1.1550145	1.1550145	1.1550145	1.1550145	1.1550145	1.1550145
Multidrug resistant protein-2	0.9890064	1.0213908	1.3553312	1.5065206	1.5065206	0.9826735	0.9826735	0.9826735	0.9826735	0.9826735	0.9826735	0.9826735	0.9826735	0.9826735
Multidrug resistant protein-1	1.1215538	0.832468	1.5208178	1.800696	1.800696	1.0782455	1.0782455	1.0782455	1.0782455	1.0782455	1.0782455	1.0782455	1.0782455	1.0782455
Phosphatidylinositol 3-OH kinase-binding protein	1.4491093	1.2233329	1.4385514	1.989151	1.989151	1.0843782	1.0843782	1.0843782	1.0843782	1.0843782	1.0843782	1.0843782	1.0843782	1.0843782
Phase-1 RCT-160	0.9787454	1.058127	1.5484541	1.249572	1.249572	1.3369893	1.3369893	1.3369893	1.3369893	1.3369893	1.3369893	1.3369893	1.3369893	1.3369893
Insulin beta-4	1.2538141	1.3365333	1.17494	1.258733	1.258733	1.042833	1.042833	1.042833	1.042833	1.042833	1.042833	1.042833	1.042833	1.042833
MDMP cytochrome P450 oxidoreductase	2.470575	3.0290654	2.850774	1.1718748	1.1718748	1.2874634	1.2874634	1.2874634	1.2874634	1.2874634	1.2874634	1.2874634	1.2874634	1.2874634
Wnt1	1.5965804	1.976271	1.4530799	1.1675523	1.1675523	1.095205	1.095205	1.095205	1.095205	1.095205	1.095205	1.095205	1.095205	1.095205
Endogenous retroviral sequence, 5' and 3' LTR	1.1178746	0.9177007	0.83537877	0.9565948	0.9565948	1.2251582	1.2251582	1.2251582	1.2251582	1.2251582	1.2251582	1.2251582	1.2251582	1.2251582
Phase-1 RCT-53	1.077646	1.1549873	1.1484795	0.90745816	0.90745816	0.8528189	0.8528189	0.8528189	0.8528189	0.8528189	0.8528189	0.8528189	0.8528189	0.8528189
Phase-1 RCT-54	0.8657089	1.002523	0.92836314	0.9753856	0.9753856	1.0327463	1.0327463	1.0327463	1.0327463	1.0327463	1.0327463	1.0327463	1.0327463	1.0327463
Phase-1 RCT-240	1.2050772	1.2312205	1.1205583	0.958469	0.958469	1.0615058	1.0615058	1.0615058	1.0615058	1.0615058	1.0615058	1.0615058	1.0615058	1.0615058
Osteopontin	0.769339	0.7151236	0.7897447	0.8272815	0.8272815	0.9918158	0.9918158	0.9918158	0.9918158	0.9918158	0.9918158	0.9918158	0.9918158	0.9918158
Organic anion transporting polypeptide 1	0.8424167	1.2908117	0.8633117	0.7671586	0.7671586	1.2049053	1.2049053	1.2049053	1.2049053	1.2049053	1.2049053	1.2049053	1.2049053	1.2049053
Phase-1 RCT-241	1.1288794	1.248865	1.1822113	1.0154152	1.0154152	1.1147158	1.1147158	1.1147158	1.1147158	1.1147158	1.1147158	1.1147158	1.1147158	1.1147158
Tissue factor pathway inhibitor	1.1402266	1.3005822	0.9122771	2.0508862	2.0508862	0.8978823	0.8978823	0.8978823	0.8978823	0.8978823	0.8978823	0.8978823	0.8978823	0.8978823
Cytin-dependent kinase 4 inhibitor P274ip (alternate)	1.24806	1.2963644	1.490874	1.4625312	1.4625312	1.216461	1.216461	1.216461	1.216461	1.216461	1.216461	1.216461	1.216461	1.216461
Gonin	1.1620249	1.2015182	1.0182015	1.315810	1.315810	1.094312	1.094312	1.094312	1.094312	1.094312	1.094312	1.094312	1.094312	1.094312
Phospholipase D	1.1638477	1.2878031	1.2182161	1.182242	1.182242	1.0258871	1.0258871	1.0258871	1.0258871	1.0258871	1.0258871	1.0258871	1.0258871	1.0258871
Phase-1 RCT-39	0.9687884	0.9439664	1.1070244	1.2671063	1.2671063	1.2435006	1.2435006	1.2435006	1.2435006	1.2435006	1.2435006	1.2435006	1.2435006	1.2435006
Phase-1 RCT-113	1.10326	1.1769538	1.1946965	1.067934	1.067934	1.0673335	1.0673335	1.0673335	1.0673335	1.0673335	1.0673335	1.0673335	1.0673335	1.0673335
Adenine nucleotide translocator 1	0.82336273	1.0071508	0.97388124	0.8855724	0.8855724	1.2821	1.2821	1.2821	1.2821	1.2821	1.2821	1.2821	1.2821	1.2821
Alpha-1 acid glycoprotein	0.9216974	0.90068165	0.74890105	0.846447	0.846447									

Organic cation transporter 3	0.75877884	0.78229594	0.96056583	1.0090204	0.977807	1.0540618	1.149824	0.8676533	0.9721776	1.0037892	0.94701785	0.98328555	1.1395104	0.9992174
Hypoxia-inducible factor 1 alpha	1.0133915	1.0342407	0.9739865	1.2033443	1.2401127	0.9720047	1.2273028	1.445833	0.914703	0.914703	0.8633864	0.8633864	0.8633864	1.0268269
Phase-1 RCT-43	1.282331	1.0675673	1.1366891	0.88744074	1.0391033	0.9690876	1.1270868	1.0472872	1.0727459	1.055149	0.8575203	0.8288704	0.9075623	1.0375033
Phase-1 RCT-45	1.0554063	1.1144654	1.1111555	0.8853482	1.031343	1.3047866	1.0251353	1.1370989	1.0353446	1.0503093	0.8053949	1.0582139	0.8871783	1.0051788
Mutase dehydrogenase, cytosolic	0.5623552	0.65065186	0.7855637	0.9621445	1.4420857	1.2929433	1.1796053	0.9817881	0.940132	0.981898	0.8559116	0.828168	0.90603596	1.0659502
VL30 element	1.1431311	0.9483119	0.8422441	1.1464659	1.5042222	1.7297396	1.3237282	1.1145892	1.0367837	1.074420	1.0200726	0.968102	1.1133779	1.1610421
Phase-1 RCT-169	0.8390963	0.7194647	0.7471899	0.8826841	0.9775332	0.7733654	0.8761932	1.2687332	1.4668641	1.0637462	0.95181155	0.8969341	0.9771656	
Alpha-fetoprotein	0.81203363	0.76710016	0.788234	0.8997006	0.8956628	0.9944438	1.1033688	1.128138	1.078795	1.2226522	1.0546225	1.0181504	1.3550496	0.7843105
Calgranulin B	0.7442076	0.6825603	0.8144553	0.3558821	1.032233	0.9167333	1.0766124	1.0354589	1.1625705	1.2688126	0.9917899	1.1493467	1.2125367	0.7712094
Tissue plasminogen activator	0.9073392	0.9480187	0.88824004	0.7071686	0.7613868	0.87760863	0.9038263	1.1744255	1.2688056	1.2956125	1.1070098	0.97967094	0.9705379	1.0832442
Phase-1 RCT-185	1.3698378	1.3555295	0.86590636	0.65531213	1.0625063	1.0825924	1.156161	1.0912263	1.1272228	1.0275407	0.8638427	0.8945927	0.94462946	0.7785626
Liver fatty acid binding protein	0.4969068	0.5101045	0.7374558	0.3765253	0.6394025	0.7515468	0.74988365	0.5302497	0.8617237	0.8638427	0.82853095	0.761897	0.86748275	1.1373945
Alpha-1 microglobulin/albumin precursor (Aurp)	0.7180993	0.6856427	0.6687815	0.88041574	0.9901785	0.86543855	0.8977104	0.9421713	0.9941565	1.0612668	1.0445881	1.0830485	0.9275728	1.5457531
Phase-1 RCT-284	1.1363735	1.086518	0.977747	1.182238	0.89858156	0.9702015	1.2286991	1.688191	1.2011724	0.94583476	1.1972719	1.0055328	0.9647307	1.0389698
Phase-1 RCT-151	0.7989782	0.9451278	1.003359	1.1489289	1.1314901	0.9702015	1.2286991	1.688191	1.2011724	0.94583476	1.1972719	1.0055328	0.9647307	1.0389698
Phase-1 RCT-158	1.0982581	1.2485065	1.0540952	1.1546774	1.1489289	0.9702015	1.2286991	1.688191	1.2011724	0.94583476	1.1972719	1.0055328	0.9647307	1.0389698
Phase-1 RCT-221	0.9249013	0.94620645	1.4035009	0.8939217	0.9704361	0.9576118	1.1285045	1.529925	1.5381535	1.2551065	1.2152145	1.0852811	1.0025394	0.9804421
Phase-1 RCT-235	0.829583	1.2798919	0.89155436	0.5050325	0.94626683	1.0071723	0.9839194	1.0345874	0.91465247	0.807099	0.83588024	0.86124605	1.1353787	0.9810885
Oxidative anion transporter 3	0.9343071	0.84529687	1.1796382	0.5050325	0.94626683	1.0071723	0.9839194	1.0345874	0.91465247	0.807099	0.83588024	0.86124605	1.1353787	0.9810885
Matrix metalloproteinase-1	0.4822856	0.48683107	0.5021033	0.41164555	0.5088361	0.39193463	0.62361175	0.45497027	0.6073489	0.70288165	0.7147362	0.8004609	0.8448343	1.0116594
Urinary protein 2 precursor	1.2218957	1.1195118	1.1763469	1.1240487	1.0815476	1.043943	0.9318655	0.77701235	0.6881351	0.8256831	0.71760398	0.7221816	1.0439668	0.9715513
Phase-1 RCT-212														
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=neat, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 18 and as included in Table 25)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)															
Compound/Dose (2)	CIS 2.5	CIS 3.3	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10	CIS 10
Antiral Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Uter Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Geno Name (5)	1.5255641	0.98279764	2.0935364	1.2717338	1.4697685	1.635553	1.6682786	1.6886828	1.6886828	1.6886828	1.6886828	1.6886828	1.6886828	1.6886828	1.6886828
Insulin-like growth factor binding protein 1	1.6882156	1.4777694	1.684515	1.3535101	1.3058107	1.0652044	0.80280364	0.94302427	0.96089756	1.1410654	0.83742305	1.182363	0.9448762	1.0050019	1.0050019
Cleaved IIS	1.1358466	0.8760836	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748	1.3631748
C-MYC	1.2489318	0.971477	0.9794726	0.884091	1.0045447	0.9423859	0.9880772	1.2305856	0.83564846	0.8146713	0.80918814	1.085283	1.2332701	1.000479	1.000479
NIPK	1.137962	1.2705058	1.4484932	1.8223121	0.9423534	1.8565511	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558
Cathepsin L sequence 2	1.0185418	1.5842484	1.6848624	2.800217	1.8524593	0.86285214	1.165944	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558	1.0741558
Heme oxygenase	1.0218907	1.0670938	1.0749619	0.95592815	1.1057781	1.9533303	1.8476527	1.8476527	1.8476527	1.8476527	1.8476527	1.8476527	1.8476527	1.8476527	1.8476527
Phase-1 RCT-109	0.8719923	0.9769893	0.8234713	0.8617486	0.92697245	1.2067409	1.2807994	1.2807994	1.2807994	1.2807994	1.2807994	1.2807994	1.2807994	1.2807994	1.2807994
Phase-1 RCT-111	0.6047032	0.6987714	0.8065209	0.8078074	0.7143409	1.0030717	0.4414594	1.2489318	1.2489318	1.2489318	1.2489318	1.2489318	1.2489318	1.2489318	1.2489318
Angiotensin-converting enzyme	1.3011736	1.3075838	1.3293858	1.2837437	1.4401125	0.92101336	1.0625337	0.88504366	1.020129	0.7759283	0.89522725	0.94444776	0.9975163	1.000479	1.000479
DNA polymerase beta	1.3376938	1.8785599	1.3075838	0.8456517	0.9198712	1.0287205	1.1350093	1.2582362	1.3855789	1.1361225	1.0736456	0.769631	0.8284745	1.011638	1.011638
Phase-1 RCT-103	1.3364482	1.1144948	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296	1.1011296
Ribosomal protein S9	2.2036672	1.6124748	1.5848107	1.953651	1.8955631	1.1780736	0.8423352	1.0143719	1.0055814	0.9688541	0.9789026	1.3952399	1.7235432	1.343454	1.343454
Phase-1 RCT-15	3.5259134	1.5741537	6.510779	5.254086	2.702853	1.3815868	0.7828991	0.7330623	0.90331924	0.7485885	0.9462527	1.0810647	1.1090052	1.14337	1.14337
Macrophage inflammatory protein-2 alpha	1.8542887	1.2825193	3.7288678	4.5822386	5.091543	1.108902	1.467495	1.0497838	0.9825846	0.7283582	0.9459561	1.049002	1.1530355	0.91202645	0.91202645
Protein PCT-3	1.4204466	1.177894	1.3165503	1.2402331	1.1853268	0.8550513	0.5005803	0.2375386	1.0335683	1.117763	0.56251065	1.184213	1.0848047	1.0848047	1.0848047
Phase-1 RCT-181	0.9707567	1.0677925	1.1661088	1.1781879	1.0542506	1.4071895	0.8423515	1.0687173	0.8282273	0.7232413	0.8691387	0.7113243	1.0045674	0.87348014	0.87348014
Cyclin D3	1.3884826	1.4339998	1.0418196	1.834025	1.305988	1.0406549	1.1629982	1.0635081	0.381681	0.7232413	0.8691387	0.7113243	1.0045674	0.87348014	0.87348014
Phase-1 RCT-108	0.9533886	1.0530416	0.9157331	1.4339988	1.0827908	1.1475203	1.078735	1.0745275	1.0454393	0.8537906	0.8622085	0.8523633	0.720221	1.038143	1.038143
Phase-1 RCT-56	1.5533084	1.3516098	1.8137398	1.4300406	1.6135039	0.74336684	1.059741	0.8691959	0.854418	0.4760316	1.0730115	0.8776026	1.1762821	0.8800721	0.8800721
Phase-1 RCT-192	1.1538577	1.2775072	1.1905895	1.1901378	1.295087	0.98148954	1.0239148	0.98040277	1.0054438	0.36555178	1.072813	0.97103125	0.8770569	0.9988019	0.9988019
Phase-1 RCT-75	1.2807046	1.5780407	1.3445678	1.1639359	1.3550801	1.0085129	0.8116758	0.8124058	0.90770644	0.943137	0.88550295	1.1002442	1.5209868	0.8949488	0.8949488
Acid-Mannosidase	1.2310108	1.6246802	1.0086026	1.0018318	0.8330168	0.8443353	1.1030081	0.9296307	0.9068084	0.9582084	0.9582084	0.9582084	0.9582084	0.9582084	0.9582084
Phase-1 RCT-45	0.88535494	1.076867	0.8457597	0.857531	1.0048262	0.8443498	1.2206371	0.8585103	0.9682702	1.1859393	1.1859393	1.1859393	1.1859393	1.1859393	1.1859393
Cystatin C	1.075872	1.4037794	1.1508601	1.0509075	1.6484093	0.87138474	1.2702371	1.2702371	1.2702371	1.2702371	1.2702371	1.2702371	1.2702371	1.2702371	1.2702371
Phase-1 RCT-48	1.6599184	1.287744	1.7381076	2.1042411	2.280722	0.8579553	1.0074778	1.5625543	0.9719088	1.0246946	0.9517889	1.1515337	1.0001892	1.03306	1.03306
Phase-1 RCT-19	0.9735285	0.9074769	1.028709	1.0739723	0.809533	0.8598891	1.0074778	1.5625543	0.9719088	1.0246946	0.9517889	1.1515337	1.0001892	1.03306	1.03306
Phase-1 RCT-156	1.3935884	0.96531564	2.0758855	2.1534743	1.7632583	1.4371085	1.0540632	0.87720746	1.0274822	0.8753778	0.88770806	0.8946881	0.8584214	1.03506	1.03506
Phase-1 RCT-157	0.87328843	1.0282118	0.8438874	0.8755758	1.0171106	1.0381317	1.0540632	0.87720746	1.0274822	0.8753778	0.88770806	0.8946881	0.8584214	1.03506	1.03506
Phase-1 RCT-177	1.0758145	1.3288052	1.443341	0.9833329	1.428738	0.7881654	2.2950718	1.102518	1.0005563	0.9495562	1.0664808	0.8375743	0.7772692	0.8225645	0.8225645
Macrophage inflammatory protein-1 alpha	1.1828245	0.80317885	1.572121	0.7553384	1.2841184	1.0470881	0.6532739	0.82040334	0.9408882	1.035419	0.94521725	0.9189344	0.7687463	0.84956175	0.84956175
Zinc finger protein	2.1485498	1.1880189	3.0701125	1.2276562	3.362819	0.8950025	0.82040334	0.9408882	1.035419	0.94521725	0.9189344	0.7687463	0.84956175	0.84956175	0.84956175
Glutamine synthetase	0.8796079	0.8866431	0.8799523	0.84890465	0.9163064	1.1911749	1.0821588	1.1916877	0.9126689	0.8225993	1.0531967	0.75379	1.0130828	1.3614047	1.3614047
Phase-1 RCT-73	1.382331	1.4118668	1.0244578	0.94585145	1.1529843	0.9984097	1.1695831	0.9126689	0.8601201	0.7414722	0.82302766	0.9241944	0.8375161	0.9321785	0.9321785
Glutamine synthetase	0.8196399	0.784235	0.82316214	1.072345	0.7397378	0.86455127	1.2008616	0.9126689	0.8601201	0.7414722	0.82302766	0.9241944	0.8375161	0.9321785	0.9321785
Phase-1 RCT-242	2.30323	0.974168	3.7794254	0.670761	4.648406	0.97587514	1.2008616	0.9126689	0.8601201	0.7414722	0.82302766	0.9241944	0.8375161	0.9321785	0.9321785
Phase-1 RCT-60	1.567145	1.2421951	1.6245226	1.4912687	1.813279	1.0215045	0.80988824	1.0130222	0.9042381	1.0352192	1.0352192	1.0352192	1.0352192	1.0352192	1.0352192
Phase-1 RCT-10	1.0774795	1.1615913	1.0465158	1.0209771	1.0209361	1.463058	0.9130222	0.9042381	1.0352192	1.0352192	1.0352192	1.0352192	1.0352192	1.0352192	1.0352192
Interleukin beta1	0.6970035	1.0962051	0.95725816	1.0701771	1.0922563	1.2558843	1.1401287	1.2200412	1.0537893	1.1159844	1.1123301	1.3409237	1.1609395	1.111859	1.111859
Insulin-like growth factor binding protein 5	0.6970035	1.0962051	0.95725816	1.0701771	1.0922563	1.2558843	1.1401287	1.2200412	1.0537893	1.1159844	1.1123301	1.3409237	1.1609395	1.111859	1.111859
Phase-1 RCT-59	1.2503893	1.167494	1.1649166	1.0380919	0.84186826	1.3210574	0.7695322	1.0088153	1.0686221	1.125197	0.8913377	0.9321231	0.9548619	0.9069224	0.9069224
Phase-1 RCT-76	1.4307327	1.0587649	3.1518254	2.462888	3.713464	1.104827	0.85027604	1.022412	1.077258	1.0592402	1.235905	0.690686	0.9896943	0.82620886	0.82620886
Ferritin H-chain	0.83145	0.894307	0.79328	0.8570732	0.86541325	1.1872213	1.1403537	1.1291839	0.7862865	1.0074884	0.74950796	1.0748004	1.0580496	0.97488123	1.0133328
Selenoprotein P	0.9845769	0.9062002	0.8070898	0.7502084	0.8804153	0.844899	0.8346895	0.8346895	0.8346895	0.8346895	0.8346895	0.8346895	0.8346895	0.8346895	0.8346895
PTEN/MMAC1	0.78672135	0.8353693	0.9084015	0.78551036	0.86275784	1.1643944	1.0884153	1.0884153	1.0884153	1.0884153	1.0884153	1.0884153	1.0884153	1.0884153	1.0884153
Phase-1 RCT-112	0.76261127	0.8874226	0.73480594	0.9533588	0.8406635	1.0219152	0.8623088	0.6966884	0.9531345	0.7442317	1.0422388	1.0422388	1.0422388	1.0422388	1.0422388
Phase-1 RCT-214	0.80671495	0.8954931	0.84607416	0.8770238	0.787743	0.7070087	0.767743	0.767743	0.767743	0.767743	0.767743	0.767743	0.767743	0.767743	0.767743
Thymidylate synthase	0.9737663	0.924723	1.846705	1.143121	1.0171559	0.8160426	0.9509089	1.0589089	1.0589089	1.0589089	1.0589089	1.0589089	1.0589089	1.0589089	1.0589089
Phase-1 RCT-13	2.0117311	2.2180352	1.8881448	1.38110816	1.0349048	1.3237841	4.6346677	1.2842755	0.98756877	1.868949	1.3416359	0.933883	0.7454076	1.2983852	1.2983852
Nucleosome assembly protein	0.56762823	0.72010875	0.63013005	0.6103741	0.72481723	0.2808947	0.99592926	0.8471167	0.98756877	1.868949	1.3416359	0.933883	0.7454076	1.2983852	1.2983852
Cleaved alpha-hydroxylase (P450 VII)	0.4078423	0.44323842	0.5973887	0.6207004	0.2987733	0.7894184	1.1761727	0.9309568	2.6280757	1.0142232	1.4397689	0.93563527	0.93563527	0.93563527	0.93563527
Vesicular monoamine transporter (VMAT)	0.9534271	1.0336556	1.0237011	0.8655788	0.911116	1.00300923	1.05547	0.9389642	0.6931619	0.9210063	0				

Phase-1 RCT-32	1.1902665	1.1410105	1.3905768	0.8589768	1.0837393	1.4771168	0.8024173	1.3796704	0.9999713	1.5827183	1.5354285	1.1712568	1.1627493	1.1539333
Peroxidase assembly factor 1	1.0117518	0.99887925	1.3905768	0.8589768	1.0837393	1.4771168	0.8024173	1.3796704	0.9999713	1.5827183	1.5354285	1.1712568	1.1627493	1.1539333
8-oxoquinoline DNA glycosylase	1.0533049	1.0239844	0.9746743	0.7663119	1.0778586	0.9606576	0.9461124	0.9770719	1.011241	0.9453846	0.9810204	0.9561508	0.9802397	0.82462405
Phase-1 RCT-42	0.893941	0.96845325	1.0468693	0.90600618	0.9461124	0.9770719	1.011241	0.9453846	0.9810204	0.9561508	0.9802397	0.82462405	1.3301774	1.3805434
Marlin F/G	0.4500415	0.69158725	0.4443504	0.46843138	1.3445771	1.3084347	1.2895867	1.0816248	0.9162435	0.95230025	0.9465497	0.998732	0.88285434	0.80130695
Phase-1 RCT-184	1.198853	1.1408252	1.1608063	1.215173	1.1189003	0.9191617	0.8798335	0.94614325	1.104003	0.9162435	0.95230025	0.9465497	0.998732	0.88285434
Phase-1 RCT-168	0.544033	0.85919055	0.53078234	0.5121778	0.4749334	1.0402095	0.8699736	1.0798941	1.104003	0.9162435	0.95230025	0.9465497	0.998732	0.88285434
Phase-1 RCT-119	0.49367675	0.8560804	0.6704112	0.6299486	0.6250264	0.5571653	0.8699736	1.0798941	1.104003	0.9162435	0.95230025	0.9465497	0.998732	0.88285434
Carbonic anhydrase II	0.49149778	1.0187402	0.8542819	0.8809259	0.7144324	0.85422074	0.8809259	0.7144324	0.85422074	0.8809259	0.7144324	0.85422074	0.8809259	0.7144324
Hydroxymethylglutathione	0.8779608	0.9674324	0.8550968	0.901765	0.92709196	0.9488192	1.0501238	1.0651686	0.97894603	1.1495394	0.9664941	1.0938791	1.0919402	1.0856552
Phase-1 RCT-179	1.5333955	1.5609578	1.4761458	1.37528	1.7858474	1.558181	1.405441	1.561637	1.2989447	0.8664941	1.1495394	0.9664941	1.0938791	1.0919402
Phase-1 RCT-161	0.840846	0.930438	0.92282624	0.9455597	0.7725709	0.8508647	0.5625117	0.6329725	0.934336	1.1194715	1.2587571	0.7993946	0.8837158	0.8002781
Phase-1 RCT-207	1.1799665	1.1396152	2.3001273	1.2054566	2.2168907	0.95384487	0.8985697	1.313621	0.9316937	1.5294358	1.3906688	0.9013122	0.9003455	0.8002781
Phase-1 RCT-144	1.760144	1.4925249	1.826263	1.858191	2.179398	1.2780149	1.506084	1.75432	0.9510132	1.063542	0.935442	0.9311223	1.164808	0.84731406
Cyclodextrin P450 2E1	0.8157286	0.9160053	0.7208028	0.64104768	0.6841291	0.6891042	0.9025334	1.303385	1.0680745	1.200954	1.182457	0.7023884	0.89477945	0.8271453
D-1	0.8157286	0.9160053	0.7208028	0.64104768	0.6841291	0.6891042	0.9025334	1.303385	1.0680745	1.200954	1.182457	0.7023884	0.89477945	0.8271453
Thrombosin-1 (Txn1)	0.8157286	0.9160053	0.7208028	0.64104768	0.6841291	0.6891042	0.9025334	1.303385	1.0680745	1.200954	1.182457	0.7023884	0.89477945	0.8271453
Carbonic anhydrase III	0.8157286	0.9160053	0.7208028	0.64104768	0.6841291	0.6891042	0.9025334	1.303385	1.0680745	1.200954	1.182457	0.7023884	0.89477945	0.8271453
Phase-1 RCT-140	0.8157286	0.9160053	0.7208028	0.64104768	0.6841291	0.6891042	0.9025334	1.303385	1.0680745	1.200954	1.182457	0.7023884	0.89477945	0.8271453
Complement component C3	1.137679	1.2642765	1.0356594	0.8073435	1.065287	1.0015546	1.75971	1.5373767	0.8914818	1.2526715	1.3574352	0.8154906	0.70991	1.321685
Glucokinase	0.8685898	1.9152843	0.8090051	0.7698305	0.8177193	0.8080473	1.75971	1.5373767	0.8914818	1.2526715	1.3574352	0.8154906	0.70991	1.321685
Phase-1 RCT-173	0.80469817	0.9310573	0.83781405	0.86132164	1.0842451	0.862765	0.8346873	1.1374375	0.8665922	0.9035594	1.0320196	0.97521454	1.0246233	1.2065557
3-methyladenine DNA glycosylase	1.0555556	0.87418028	0.9685667	0.94653305	0.841587	0.9182681	1.1195257	0.8665922	0.9035594	1.0320196	0.97521454	1.0246233	1.2065557	1.2065557
Peridominal multifunctional enzyme type II	1.024654	1.2428023	0.937773	1.333961	0.8317008	0.937773	1.333961	0.8317008	0.937773	1.333961	0.8317008	0.937773	1.333961	0.8317008
Phase-1 RCT-40	0.6969593	0.9626746	0.4342715	0.7241514	0.939008	0.6926498	0.62413175	0.6660936	0.62036045	0.6580845	1.572512	1.6342572	0.9743053	0.8072514
Sensescence marker protein-30	2.5876628	2.8529127	6.4128663	5.324824	5.726347	1.905228	0.80432514	0.9488641	0.9674813	1.4618573	1.0295708	1.056988	0.890976	1.071684
Cyclin G	1.136886	1.1213249	1.2892627	1.2892627	1.57142	0.8445663	1.078973	0.900534	1.022632	1.4581567	1.0210073	0.7045316	0.8439385	1.064818
Phase-1 RCT-28	1.2132034	0.913279	1.0882253	1.065	0.8080753	0.8078477	0.8078477	0.8078477	0.8078477	0.8078477	0.8078477	0.8078477	0.8078477	0.8078477
Alcohol dehydrogenase 1	0.37811628	0.38788866	0.254639	0.8230048	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081	1.3849081
JNK1 stress activated protein kinase	1.1231606	0.95421386	1.1187487	1.1883307	0.8225234	0.8863317	0.8863317	0.8863317	0.8863317	0.8863317	0.8863317	0.8863317	0.8863317	0.8863317
Phase-1 RCT-55	1.3759131	1.3615169	1.344485	1.213102	1.3712791	0.965292	0.8731915	0.8962677	1.3378733	1.046615	0.9266756	1.0378519	0.9676875	0.8459842
Uniquitin conjugating enzyme (RAD 6 homologues)	0.71084166	0.90658006	0.800824	0.8839609	0.82383484	0.964424	0.8731915	0.8962677	1.3378733	1.046615	0.9266756	1.0378519	0.9676875	0.8459842
DNA topoisomerase I	1.2730844	1.3691139	1.065544	0.6408466	0.70299134	0.98804735	1.0670676	1.0457111	0.8436759	0.5904681	0.8144089	0.9713705	0.8575961	1.0165472
Superoxide dismutase Mn	1.0901717	0.8745657	1.054919	2.5423782	2.5423782	1.378283	1.7268521	1.3459438	1.2521008	0.326852	0.968552	1.403422	1.2563702	1.1656072
Beta-tubulin, class I	3.100952	2.176557	1.8103938	1.301003	1.8535764	1.354631	0.5227039	0.8863524	0.88120935	0.86189705	0.8316038	1.3929535	1.3820385	1.2515024
Carbamyl phosphate synthetase I	0.36624694	0.8223444	0.952566	0.77519396	0.825828	0.8721114	1.1576936	1.0227158	0.86693356	0.5925216	0.90368303	1.2547121	0.94312775	0.94312775
Diacylglycerol kinase zeta	4.888293	4.997591	3.9264975	3.4651864	3.818494	1.325484	1.5356457	1.2492722	0.9015131	0.4463528	0.5925216	1.0038257	1.0038257	0.9986555
Phase-1 RCT-141	1.1328411	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604	1.2859604
Gamma-actin, cytoplasmic	0.4670903	0.89437487	0.7690076	0.7234197	0.8560886	0.9831177	1.122728	0.854467	1.036524	0.5559515	0.7914147	0.893161	0.7245044	0.7319123
Ribosomal protein L13A	1.0296408	1.0766726	1.1739036	0.9929432	1.1535915	1.783101	1.7414174	1.6344055	1.3864813	1.445322	1.1761609	0.9934566	1.0289431	1.326166
Phase-1 RCT-65	1.0884659	0.9324543	1.0161432	0.9639654	0.9840442	1.0598922	0.8264915	0.9006955	0.9948198	1.150421	0.98704996	1.1610723	2.2510528	0.8628353
Calin	1.7973676	0.8263295	1.4880482	1.853949	1.1067829	1.2352223	0.87554127	0.985602	1.1416882	1.0692526	1.0810723	2.2510528	0.8628353	0.991188
Protein O-mannosyltransferase 1 (Pomt1)	1.0428499	0.8992659	0.8865583	1.1610263	0.74700415	1.160987	0.80924286	0.97775976	1.2129555	1.1639662	1.1639662	1.1639662	1.1639662	1.1639662
HMG CoA reductase	0.6843324	0.67170787	0.5413084	0.8544123	0.6142057	1.3280636	0.9231883	1.1810055	1.0690053	1.3985532	1.2138932	0.8391464	0.7940911	0.97306406
Phase-1 RCT-12	1.2164948	1.017602	1.018813	1.0373377	0.874381	1.1471839	0.7148388	0.54656785	1.0334802	1.0506899	0.9575948	1.123463	1.123463	1.0282606
Interferon related developmental regulator 1 (IFRD1)	0.9431457	1.1955108	0.9815454	1.1182783	1.1427512	0.9723883	1.4954612	0.87145396	0.88102674	0.77481776	0.77481776	0.77481776	0.77481776	0.77481776
Glucose-regulated protein 78	1.323548	1.3628829	0.57047415	0.48748774	0.80595847	1.52865847	1.795371	1.127893	0.97840725	1.0476514	0.9453193	1.3657128	1.3592848	1.2858833
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.52168566	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004	0.76528004
Caspase 6	0.89458625	1.0105057	0.8008647	1.0259257	0.9371974	0.8759724	0.8759724	0.8759724	0.8759724	0.8759724	0.8759724	0.8759724	0.8759724	0.8759724
Phase-1 RCT-169	1.0227742	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023	0.8380023
Phase-1 RCT-197	1.223004	1.2207897	1.7883906	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745	2.8310745
Phase-1 RCT-34	0.43760344	0.69765484	0.61477865	0.8247668	0.64835684	0.96702912	0.9411096	0.9181694	0.9017259	1.2005653	1.1281708	2.0779154	1.158853	1.388507

Table 28

Phase-1 RCT-72	0.8523629	1.0580403	0.8638771	1.0756698	1.1188767	0.91570616	0.8688906	0.9777018	0.9716688	1.0282851	1.010514	1.026351	0.881172	0.7858265
Pyruvate kinase, muscle	0.89539054	0.67188096	1.1687266	1.1386963	0.84882945	1.1386963	0.85840307	0.9777318	0.9381889	1.1680395	0.9479128	1.126273	1.0653025	0.9400797
Phase-1 RCT-268	0.56676395	0.8343356	0.5134607	0.5561404	0.7004904	0.8702069	1.2482342	1.112614	0.8825157	0.9455362	1.2048438	0.8710663	0.7723004	0.8451968
Phase-1 RCT-269	0.827218	0.9858703	1.0214595	1.123668	0.6433379	0.9770763	0.746754	0.9065257	1.0849472	1.0148533	1.3729494	1.0845369	0.8519268	0.9519268
Cytochrome P450 2C9 (alternate clone 2)	0.8057108	0.8821331	0.5761619	0.7035754	0.84227157	0.90079427	0.93550146	0.83211717	0.45483776	0.48558294	0.8713662	1.2209338	1.6880299	1.2391876
Phase-1 RCT-280	0.6538684	0.88821175	0.8416194	0.8895557	0.9045125	0.8716355	1.0020468	0.63214755	1.1629833	0.58477783	1.0688887	0.919219	0.8591514	0.8720532
Phase-1 RCT-281	1.477188	1.5472282	1.0029103	1.492768	1.4558835	0.958166	0.82228623	0.9719808	0.8387764	0.93742828	0.9847265	1.1038551	1.0822762	0.9820134
Methylglucyl-CoA racemase alpha	0.77871615	1.200307	1.0029103	1.1865339	1.109355	0.8816292	1.156323	0.9652297	0.9571565	0.8720516	0.8683565	0.765354	0.97692364	1.625342
Cytochrome P450 1A2	1.0209686	0.90473616	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339	1.1865339
Monomelic acidase B	1.1025745	1.1765054	0.8787656	0.8659891	1.0337851	0.82207014	1.3822731	0.95480645	0.8487889	1.1877889	1.0192708	0.9433561	1.0453203	0.7675427
Phase-1 RCT-264	0.6842591	0.7495167	0.63862526	0.9444551	1.050072	0.9336653	0.93146804	0.773061	0.61575108	0.50859014	0.7885463	1.1716379	1.4752249	0.88850134
Peroxidase proliferator activated receptor gamma	0.8158811	0.74248294	0.7344958	0.8659305	0.5856412	0.9365672	1.1071827	0.8844312	0.9232786	0.9343361	0.8485606	0.8485606	0.8485606	0.8485606
Phase-1 RCT-143	1.0894426	1.2087666	1.0192534	1.2180135	1.2609415	0.7863739	0.727867	0.8045641	0.92738244	0.7825439	0.9805458	1.0482268	1.0482268	1.0482268
Phase-1 RCT-144	0.794014	0.7414343	0.987206	0.8168016	0.95130614	0.85144089	1.5565388	1.0633116	0.9673916	0.9673916	1.089464	0.8430691	0.8430691	0.8430691
Phase-1 RCT-145	0.8291213	1.0282141	1.0033274	0.5201949	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614	0.85130614
Glutathione S-transferase theta-1	0.81027534	0.9876325	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655	0.82913655
Phase-1 RCT-91	1.0950375	0.942492	0.8885333	1.0885333	1.2480153	1.1342555	0.9543396	0.9858904	1.0835987	0.9878169	1.0491802	1.3675251	1.0377627	1.0816872
Phase-1 RCT-148	0.56067866	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539	0.8268539
Phase-1 RCT-142	1.048766	1.107267	0.9042918	1.016459	1.100157	0.988783	1.0327874	0.960607	0.838773	0.8715872	0.9885436	0.9191203	0.9887805	0.8922289
Activin receptor type II	1.05148	0.808869	1.694121	0.8277551	1.614926	1.239841	1.0863955	1.1349469	1.0011168	1.2823468	0.8992147	1.0008842	0.83378584	1.0197654
Glutathione methyltransferase	0.74219596	1.313471	1.2214365	1.0314378	1.258435	0.98216045	0.687548	1.0209574	1.34678	0.8992147	1.0008842	0.83378584	1.0197654	1.0197654
Phase-1 RCT-281	0.95252161	1.0425408	0.9365945	0.86259073	1.0879245	1.0938741	1.004581	0.9830234	1.142787	0.8395879	0.9743516	0.8233277	0.84335816	0.79280783
Ciliary neurotrophic factor	1.1793779	0.86845408	1.1355479	1.0600625	1.0172067	0.868465	1.1798844	0.8330616	1.003784	1.0428596	1.0111909	0.8114206	0.8776254	0.8525587
Gap junction membrane channel protein beta 1 (gp1)	1.0417887	0.82608136	0.8883337	0.8561009	0.90051414	1.1420882	1.0019874	1.2515248	1.103773	0.8831945	1.0361983	1.3852007	1.3240503	1.272104
Phase-1 RCT-86	1.1765957	1.1004872	1.0727899	0.73466015	1.4380188	0.75520546	0.810158	1.0590922	1.014892	0.89797416	1.005274	0.8765611	0.88700574	0.76737605
Phase-1 RCT-287	0.62861736	1.0541203	0.918619	1.302222	1.095556	1.1517568	1.204581	1.0615433	1.2287438	1.0800684	1.1650663	1.1046329	1.171368	0.8985288
Reelin-binding protein (RBP)	0.8974857	1.1598943	0.88836175	1.0203984	1.1953387	0.89891237	1.0005694	0.9884885	1.1388108	1.085081	1.330354	1.117773	0.9657308	1.1738635
Very long-chain acyl-CoA synthetase	0.850678	0.9017531	0.84580916	1.1577097	1.1275765	1.0693944	1.5443369	1.0958172	1.1415984	1.014703	1.2004079	1.0113683	0.9523357	1.1210004
Strucan-1	0.9101388	1.1031542	1.0853156	1.0488709	1.2067051	0.8900775	0.8604408	0.8019077	0.8196886	0.77898533	1.0044742	1.028858	1.1011887	1.1617803
Strucan-1	0.741714	0.74851227	0.85267854	0.6504885	0.9780102	1.0487939	1.1631063	1.1903605	1.0519509	0.77898533	1.117107	0.9716827	0.9340583	0.83271394
Phase-1 RCT-145	1.670555	1.3786188	1.5410144	1.0513129	2.0686297	1.1486185	1.2856707	1.1291814	1.149875	1.0682374	1.0637333	0.97726595	1.1404167	0.95227394
Actin	0.76710845	1.0058218	0.7842018	1.0701328	0.8791791	0.7204387	0.96701697	1.002877	1.0504351	1.0007884	1.022227	1.0128781	0.96236028	1.0426081
Phase-1 RCT-89	0.6512065	1.0586655	0.6054506	0.5817346	0.7153156	0.72819173	1.2494148	1.4632164	0.93920475	1.09587735	1.1402038	1.1388048	1.0184535	1.0184535
Sarcoplasmic reticulum calcium ATPase	1.0225002	1.032208	1.0033043	0.703004	0.93056436	0.9327053	1.2452816	1.0652164	0.9787461	0.9950396	1.0118986	0.9363885	1.0868897	1.0947844
Alpha-2-macroglobulin, sequence 2	1.2085003	1.0340519	1.2915121	1.4530298	0.98050163	0.74777133	1.0888514	0.98658945	0.9782441	1.0067638	0.9410987	0.9762882	1.024381	1.0565635
Phase-1 RCT-204	1.0805094	0.9547512	0.903746	1.0038628	0.9705714	0.9138268	0.89555723	1.018074	0.9763441	1.0067638	0.9410987	0.9762882	1.024381	1.0565635
Vascular endothelial growth factor	0.6807874	0.75548214	0.7148071	0.7861106	0.58545494	0.96012014	0.7723611	0.90812856	1.0053053	0.9894451	0.8337359	1.1884434	1.0823075	1.0893791
NADP-dependent isocitrate dehydrogenase, cytosolic	0.65791476	0.9430142	0.6803416	0.8742474	0.7954787	0.98403944	0.9352381	0.88901937	0.92085246	0.8934565	0.8338779	1.040357	0.9525168	0.9525168
DNA binding protein inhibitor ID2	0.8073534	1.4864583	0.5550381	0.8539256	0.7470933	0.8611848	0.730273	1.1674544	0.9785033	0.8085563	0.9671007	1.0538318	0.8878122	0.8776065
Glutathione S-transferase Ya	0.3470667	0.9976805	0.6857648	0.7833047	1.1420643	0.8617315	1.3034561	0.8022316	0.8778724	0.5341839	1.088779	0.81127	0.89383628	1.4384098
Epoxide hydrolase	0.8448954	0.4861159	0.7019659	0.5492111	0.83347916	1.2770952	2.0622501	1.7030207	1.1254239	0.81103505	1.0873621	1.8244631	0.83844155	1.0580969
Insulin-like growth factor I	0.6536497	0.8339016	0.8054989	0.63866297	0.9137077	0.7642107	1.0022188	0.9182281	0.9737333	0.5013182	0.9503169	1.174859	1.5043548	0.83789576
Proteinase H synthase	1.3608649	0.9943605	0.8320275	0.90280515	0.9611812	1.270981	0.50440437	0.8547486	0.949491256	0.91689418	0.8562222	1.047591	1.0522078	1.0111888
Phase-1 RCT-136	0.6538097	0.9525828	1.0147219	0.7783322	1.2109388	0.9291206	0.9481702	0.8074209	1.0078807	0.81640453	0.86727705	0.8691921	0.8313278	1.0267453
Phase-1 RCT-137	0.85872954	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819	1.1528819
Phase-1 RCT-138	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864	0.7598864
Hepatic lipase	1.1743884	0.9824337	0.860547	0.88339194	1.8284426	0.88339194	0.88339194	0.88339194	0.88339194	0.88339194	0.88339194	0.88339194	0.88339194	0.88339194
Acyl-CoA dehydrogenase, medium chain	0.80593216	0.99105345	0.7192517	0.8983897	1.0941393	1.1494036	1.63175	1.5388898	1.4657246	1.2987243	1.4188348	1.2688846	1.2603661	1.0400777
Glutathione S-transferase Yb2 subunit	0.8338868	1.1852937	1.2150987	1.2510758	1.2930611	0.7785584	0.8355453	0.8035434	0.7715287	1.0357497	1.1541095	1.245149	1.1137509	1.1784238
Carbonyl reductase	0.8734395	1.0353562	1.4208936	0.8930058	1.1473848	0.98195425	0.87706814	0.97176205	1.0387591	1.2475184	0.9822595	0.83381857	0.80534935	0.8468404
Phase-1 RCT-166	0.8518827	0.6969407	0.7383644	0.8850523	0.6810765	0.9310751	1.3501159	0.9355684	1.0352687	0.7823104	0.8124917	1.0255892	0.900485	1.0801698
Apolipoprotein E	0.93730193	1.2259277	0.988032	1.2278291	1.4157788	0.80221814	1.3501159	0.9355684	1.0352687	0.7823104	0.8124917	1.0255892	0.900485	1.0801698
UDP-glucuronosyltransferase	0.8063834	0.85564086	0.4521412	0.91471533	1.2204183	0.8427236	0.70720418	0.97819085	0.86873	1.2300655	0.82725635	1.0555895	0.98933603	1.2284768
Glutathione S-transferase P1	1.6887869	1.6203547	0.8238143	1.2975584	1.5297682	1.0307732	1.024183	0.9427236	0.70720418	0.97819085	0.86873	1.2300655	0.98933603	1.2284768
Disulfide isomerase related protein (Ero72)	0.881883	0.9065032	0.6540879	0.9709727	0.93364793	0.8888459	1.0715302	0.8590006	0.89472704	0.97839048	1.0168804	1.380479	1.282579	1.2232931
Ribosomal protein L13	2.4200416	2.4720516	1.58216	1.5140771	1.7608093	1.094526	1.058495	0.87041336	0.78834014	0.6499784	0.7230058	0.885374	1.1559335	1.0830535
Cadherin	1.598298	2.0354137	1.385123	1.3422761	1.258371	1.5833123	1.6000475	1.2727708	1.1006199	0.92102575	0.66093655	0.7		

Phase-1 RCT-3	1.0629162	0.934888	1.1064224	1.063074	0.8458622	0.9847016	0.9561226	0.84623157	1.0548141	0.9108364	0.9143398	1.0078394	0.85633438
Fetuin beta (Fau)	1.0481687	0.8887275	0.6239584	1.0392927	0.9881111	0.9817707	0.9454279	0.83454197	0.96847553	0.7772356	0.8595972	0.97309712	1.2362414
3-hydroxybutyrate dehydrogenase	0.9418526	1.383831	0.8946234	0.956976	0.7078616	0.87131326	0.89741331	0.86449644	0.8643306	0.8598044	1.07843	1.0884122	1.2362414
Carbonic anhydrase III, sequence 2	0.9431118	1.0487441	0.8428215	0.82797695	1.2167135	1.1161162	0.8713135	0.8714063	0.8027306	0.8598044	0.78203924	0.78203924	1.0882459
Phase-1 RCT-10	0.6724295	1.0722588	0.7269816	0.8507194	0.9777793	0.80691123	1.0169906	0.8595983	0.82612914	0.9763463	0.8432507	0.85974087	1.1635347
Alpha-2-microglobulin	0.8469762	1.0637052	0.97774396	0.82116577	1.0160643	1.0123278	1.1696905	0.916046	0.9276891	1.7226891	0.9592802	0.9566874	1.0856674
Dynamin-1 (D100)	0.83917024	0.8443275	0.95313513	0.8241515	0.8213361	1.0888854	1.050591	0.993458	0.993458	0.97917336	0.97917336	0.993458	0.993458
Lysozyme	1.0254638	0.6397027	0.81023306	0.82261845	0.874354	1.0256	0.45768426	0.9732022	1.1413773	1.0041705	0.9605766	0.9904609	1.0744127
Phase-1 RCT-252	0.4120191	0.8975815	0.5304901	0.8434885	0.54416084	0.767445	0.89976877	1.0621316	1.113779	1.0041705	0.9605766	0.9904609	1.0744127
Phase-1 RCT-28	1.1966621	1.0160234	0.9980376	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174	1.1560174
Phase-1 RCT-42	0.9271328	0.8835688	0.8273304	0.8438165	1.1693148	1.1693148	1.1693148	1.1693148	1.1693148	1.1693148	1.1693148	1.1693148	1.1693148
Phase-1 RCT-25	1.0827335	1.060758	0.9553963	0.9277584	0.9562867	0.9562867	0.9562867	0.9562867	0.9562867	0.9562867	0.9562867	0.9562867	0.9562867
Cytochrome P450 2C11	1.1374034	1.1230654	1.2098993	1.2027262	1.026774	1.0331816	0.863584	0.863584	0.863584	0.863584	0.863584	0.863584	0.863584
Phase-1 RCT-202	1.0024682	1.3143045	1.0696697	1.030998	1.4119371	0.85261563	0.8436268	0.8167097	0.9181077	0.9239469	1.2333449	1.2333449	1.1314552
Complement factor I (CFI)	0.9715983	1.4136932	1.0029722	1.1517541	1.1115394	0.76531771	1.0726358	0.9203688	0.8603726	0.8603726	0.8603726	0.8603726	1.2596416
Proliferating cell nuclear antigen gene	1.0508074	1.0372772	0.832303	1.2783162	1.0335955	0.99157727	1.17176843	1.4001637	1.001537	1.0748879	0.9070856	0.8603726	1.0023831
Activating transcription factor 3	1.0546737	0.8146502	1.0794685	0.9563219	2.1110792	1.2802073	0.76143867	1.1390245	0.9972082	1.2822038	1.1734228	1.0272698	0.9551347
Focal adhesion kinase (pp125FAK)	1.297927	1.0777004	1.001217	0.940468	0.94661987	0.99030597	1.1272535	1.0019556	0.9672082	0.9672082	0.9672082	0.9672082	0.9672082
Phase-1 RCT-289	0.70833826	0.9783509	0.76127617	0.7188844	0.9467017	0.80605485	1.1175951	0.99165404	1.0622177	0.99165404	1.0622177	0.99165404	1.0622177
Phase-1 RCT-259	1.2693708	1.1553924	1.0640799	1.544615	1.3743566	0.8584332	0.8467166	0.8351197	0.93907565	0.8467166	0.8351197	0.93907565	0.8467166
Non-responsive element-binding protein	0.7290085	0.9552711	0.6923353	0.8271844	0.9041993	1.3774465	1.3186418	0.9631097	1.0314152	0.8715442	1.0295917	1.0531104	1.1880223
MHC class I antigen RT1.A10 alpha-chain	1.3140204	1.1089827	1.3744233	1.6525911	1.268493	1.0875078	1.0515903	1.0515903	1.0515903	1.0515903	1.0515903	1.0515903	1.0515903
AT3	0.8108145	1.18738	1.2423802	0.9326281	1.3987915	0.7825933	1.0031122	1.0031122	1.0031122	1.0031122	1.0031122	1.0031122	1.0031122
AT1	0.7821903	0.8234456	0.8413846	0.8097938	0.8083318	0.8083318	0.8083318	0.8083318	0.8083318	0.8083318	0.8083318	0.8083318	0.8083318
Phase-1 RCT-47	1.4208826	1.520556	0.9571157	1.8482352	1.069408	1.0197268	0.7865784	0.6843991	0.6857512	0.47015966	0.8744818	1.0724881	1.0004191
Colony-stimulating factor-1	1.1560817	1.1981378	1.0694802	1.1183804	1.173263	1.040345	0.9025788	0.9522469	1.035141	1.0104719	1.0302268	1.1223811	0.805357
N-cadherin	0.84148374	0.9307853	0.9358154	0.65891375	0.88059103	0.8767476	0.8767476	0.8767476	0.8767476	0.8767476	0.8767476	0.8767476	0.8767476
Phase-1 RCT-42	0.665573	0.70828915	0.66792494	0.68018377	0.80818377	0.8076718	0.8076718	0.8076718	0.8076718	0.8076718	0.8076718	0.8076718	0.8076718
Phase-1 RCT-22	1.0824978	1.0506248	0.9416633	0.9597503	1.3955013	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142
Phase-1 RCT-18	1.260461	0.9036488	1.1403708	1.3955013	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142	0.8208142
Phase-1 RCT-123	0.83781585	0.9070922	0.9643957	0.8690667	0.8940186	0.9361278	0.68168373	0.9868734	0.9673203	0.9643957	0.8690667	0.8940186	0.9361278
Phase-1 RCT-46	1.0553954	0.93294744	0.92569864	1.0203813	0.8833387	0.8833387	0.8833387	0.8833387	0.8833387	0.8833387	0.8833387	0.8833387	0.8833387
Expiratory nitrobenzylthiosulfonate-sensitive	0.5328558	0.8721459	0.3385245	0.48118313	1.0181289	1.3087037	0.96037096	0.6587025	0.8653228	0.9802604	1.2130059	1.0916361	1.083336
Endothelial transporter	0.6776803	1.0758263	0.7597561	0.84169644	0.8603395	0.85531454	0.9914453	0.95101404	0.85942134	0.76507765	0.9415851	1.0148141	0.9855759
Glucose transporter 2	0.41103432	0.6918534	0.8351827	0.9265834	0.7700372	0.6535617	1.0915757	0.6616241	1.000593	1.142383	0.674554	0.576538	0.7308886
Mitochondrial protein-2	1.0311834	0.8208574	1.8552633	2.561786	1.9034702	1.1746423	1.3900396	1.1634701	1.2561334	1.854316	1.1347028	1.3345523	1.0658422
Mitochondrial protein-1	1.2439917	0.9502845	2.9811823	2.897808	1.5689169	1.0108095	1.0120044	1.017581	1.5693139	1.122292	1.3366512	1.0589719	1.4592414
Prostacyclin/thromboxane-binding protein	1.1957243	1.1784271	1.3102847	1.3584655	1.2186543	0.8844397	0.8823235	0.8901179	0.8901207	0.7915566	0.7907923	1.2726869	1.3891957
Phase-1 RCT-180	1.539216	1.4524013	1.4823052	0.99388934	1.711872	1.0894088	0.87228425	0.9145549	1.0611488	0.7903211	0.8830684	0.82858243	1.1221172
Integrin beta-4	1.0940791	0.88951276	1.036455	0.9421206	0.8703772	1.0761981	0.6644133	1.0050491	1.0484931	1.0302821	0.8675053	0.8653471	0.85466385
NADPH cytochrome P450 oxidoreductase	1.1569851	0.8486799	1.294615	1.1251336	0.864258	1.2847	0.45141283	0.9137604	1.0737891	1.570174	1.0739831	1.5539337	1.6080357
Warfarin	1.5035222	1.2638515	1.50607	4.08928	3.4821618	0.9517542	0.9840923	0.94105764	1.0340734	1.0175555	0.9414885	0.78824746	0.33552624
Endogenous retroviral sequence, 5' and 3' LTR	0.8612835	0.92270666	0.54682577	0.86780324	0.96978414	0.95709624	1.0348	0.951438	1.0184007	1.085277	0.8741164	0.65157807	0.6470783
Phase-1 RCT-53	0.8554768	0.8594768	0.76014894	0.7461311	0.8260678	0.9986994	0.9987174	0.9275787	1.3110704	1.0722708	0.944229	1.0340971	1.083175
Phase-1 RCT-54	1.1633166	1.1845413	1.1448398	1.3069937	1.4471786	1.2799266	0.97859174	1.033578	1.0485672	1.0331302	0.89708424	0.94654308	0.8222181
Phase-1 RCT-240	0.83728135	0.99953015	0.9116349	0.7351872	1.2833073	1.0204208	0.87860785	1.02621	1.0758342	0.9530173	0.80753514	0.78515625	0.9172687
Osteopontin	0.8193125	1.2305849	0.94447535	1.0864407	1.1335415	0.740724	1.0749507	0.7616151	0.82797107	0.67849624	0.96190568	1.0227598	1.091563
Organic anion transporting polypeptide 1	0.8308351	0.8870365	0.7051098	0.90643615	1.099602	1.1413019	0.82543953	1.0481932	1.2706589	1.0716151	1.50783	1.309006	1.1300581
Phase-1 RCT-241	4.8127553	2.9486634	2.1766661	1.1122862	2.938593	1.0363545	2.106961	1.1297251	0.96274424	0.673853	0.77530426	0.78849726	1.0845905
Tissue factor pathway inhibitor	1.0653146	1.0601551	1.1455456	1.1482121	0.95506566	1.1162702	1.2469309	0.9603133	0.7640941	0.8045913	0.82019105	1.1455994	0.91722696
Cyclin-dependent kinase 4 inhibitor P21/kip1 (alternate clone)	0.898451	0.845915	1.2125689	1.6200546	1.4630066	1.7396414	1.4343387	1.3479036	1.5240782	1.4636071	1.3409891	1.1104891	1.0052854
Phospholipase D	0.9059803	0.9463231	0.8114221	0.8791264	0.864717	0.90494	0.3698325	0.9380286	0.8805574	1.10201	0.87521454	0.884999	0.7879387
Phase-1 RCT-39	1.1695555	1.2139348	1.162363	1.1832683	1.1118488	1.346315	0.961741	1.1393569	1.0384971	1.2011676	1.0223245	0.78846313	1.023245
Phase-1 RCT-258	1.4600809	1.4139081	1.3011248	0.8719388	1.3451556	0.9503531	1.1584933	0.7179073	1.0188663	0.9749638	1.0334486	0.9592435	1.002929
Phase-1 RCT-113	1.995919	1.8300588	2.190394	1.8244907	2.040216	1.1216137	0.9388043	1.055445	0.9835567	0.94627875	0.825536	1.048975	1.1097275
Adenine nucleotide translocator 1	0.95336745	0.82575555	0.91131955	0.78620764	0.8428224	0.78475343	0.9279408	0.7557625	0.8648478	0.7178029	0.8167441	1.2768141	1.2768141
Alpha-1 acid glycoprotein	9.906218	9.17187	9.748866	7.6964277	1.4198373	1.4198373	1.4198373	1.4198373	1.4198373	1.4198373	1.4198373	1.4198373	1.4198373
MHC class II antigen RT1.B.1 beta-chain	1.0347805	0.7897221	1.3604579	1.5439461	2.808278	1.354778	0.40597698	0.84007995	1.1363348	1.028634	1.3353662	1.0427824	0.5707145

Table 28

Organic cation transporter 3	1.1905781	0.9693128	1.2634687	1.101564	1.0014888	1.1747043	1.5931417	1.1952131	1.0578806	1.0272671	1.0639788	0.96424858	0.87350366	1.1472205
Hypoxia-inducible factor 1 alpha	1.0768511	0.8890503	1.1197275	0.9509475	1.1195817	1.2085173	1.2787422	1.0872145	1.0257901	1.1510673	1.103817	0.94252588	0.85012716	1.0181425
Phase-1 RCT-43	0.9629973	1.01735	1.0448523	0.8640939	1.0609941	1.1925489	0.9461465	1.0004077	1.1190143	0.97736597	1.089102	0.8040402	0.86728204	0.8345307
Phase-1 RCT-45	1.099003	0.8643554	1.129485	0.8601322	1.7368328	1.2450672	0.9236604	1.0615476	1.1273528	0.9367973	1.0182231	0.76589714	0.9163188	0.783048
Malate dehydrogenase, cytosolic	1.0406021	1.4722912	0.9791184	1.1092082	1.2134337	0.78518073	0.90899575	0.85486903	1.0665793	0.72318697	0.94428027	0.85455384	0.9163188	1.0956235
VL30 element	1.8812829	1.2526938	0.6872083	1.0043805	1.3486897	1.2726611	1.5941685	1.31680708	0.9040069	0.8527022	1.033908	1.1200721	1.4748385	1.1971502
Phase-1 RCT-189	0.8576794	0.89773943	0.9009552	0.97974753	1.2084311	0.9405941	1.062203	0.9833077	0.8623762	0.8731227	0.9159298	1.0845745	0.95355905	0.8880004
Alpha-fetoprotein	0.87411815	1.0524913	0.8564319	1.0210074	1.2451465	1.0666528	1.1367122	0.78256685	0.91473558	0.84721905	0.9318565	0.89060354	1.062075	0.9383554
Calgranulin B	0.82182014	1.0848544	0.91145635	0.9882328	0.99513817	0.83050424	0.8784427	0.9086979	0.8376265	0.84888786	0.9776528	1.2136102	1.233382	1.0992107
Tissue plasminogen activator	1.1040685	1.0848544	0.91145635	0.9882328	0.99513817	0.83050424	0.8784427	0.9086979	0.8376265	0.84888786	0.9776528	1.2136102	1.233382	1.0992107
Phase-1 RCT-185	1.0310414	1.1701188	1.1176592	1.2265487	1.243889	0.86359864	0.97447884	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-186	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-187	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-188	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-189	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-190	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-191	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-192	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-193	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-194	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-195	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-196	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-197	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-198	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-199	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-200	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-201	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-202	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-203	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-204	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-205	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-206	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-207	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-208	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-209	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-210	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-211	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-212	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-213	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-214	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-215	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-216	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-217	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-218	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-219	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-220	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-221	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-222	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-223	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-224	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-225	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-226	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-227	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-228	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-229	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-230	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-231	0.8706386	0.7242712	0.8280035	0.6795189	0.9256668	1.7007453	1.7047597	1.3365463	1.7108832	1.183079	1.4679508	0.8555131	1.161882	0.9953316
Phase-1 RCT-232	0.8706386	0.7242712	0.8280											

Table 28. Expression Data for 6 Hour Timepoint (1)													
Compound-Dose (2)	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180	CLOZ 180
Animal Number (3)	2431	2432	2433	151	152	153	2241	2242	2243	2251	2252	2253	2141
Gene Name (5)	no	no	no	no	no	no	no	no	no	no	no	no	no
Insulin-like growth factor binding protein 1	1.0181067	1.122305	0.8346851	1.0216945	0.9608531	0.96376235	0.8641444	1.4337782	0.8687184	8.189722	36.183892	18.84923	1.2333761
Gad65	0.9330088	1.1765846	0.9423211	0.7603655	0.8100289	1.0811524	1.3686892	1.365269	1.784447	1.323875	1.5671651	1.8510119	1.0266859
Gad67	0.9443395	3.2173533	0.8368362	1.2135689	1.3119427	1.4491754	1.3448978	2.168978	1.3780406	2.690382	4.500665	5.7097656	1.1369349
Calpains L1 sequence 2	1.1249355	1.0868553	1.068168	1.0689865	1.0631784	1.2450101	1.1434065	1.1277021	1.0629793	1.2139443	4.937214	1.2689897	1.1532356
Heme oxygenase	0.9306482	1.1759472	1.5047377	0.8622333	0.8943788	2.1601736	3.304343	2.968518	3.1731453	2.968518	5.7428937	4.2824363	1.2500953
Phase-1 RCT-109	1.650137	1.1148443	1.3084055	1.2620971	0.9538655	0.6776345	0.7629441	1.2303735	0.9211622	1.3211163	0.8873931	1.0621458	1.0715398
Phase-1 RCT-109	1.0754565	1.0705416	1.0619836	0.781185	0.892053	0.6776345	1.2629441	1.2303735	0.9211622	1.3211163	0.8873931	1.0621458	1.0715398
Phase-1 RCT-109	0.9821345	1.3365	0.9423895	1.0972352	0.8214862	0.6662127	0.7658788	1.025436	0.891881	1.1884301	1.1138336	1.2138336	1.400689
Phase-1 RCT-109	1.245413	1.3072342	1.1597457	0.9551878	1.0512652	0.9068866	0.7658788	1.025436	0.891881	1.1884301	1.1138336	1.2138336	1.400689
Phase-1 RCT-109	1.8108497	1.0505555	1.1597457	0.9551878	1.0512652	0.9068866	0.7658788	1.025436	0.891881	1.1884301	1.1138336	1.2138336	1.400689
Phase-1 RCT-109	0.8571886	0.9326555	1.162456	0.8312061	0.8313885	0.8312061	0.8313885	0.8312061	0.8313885	0.8312061	0.8313885	0.8312061	0.8313885
Phase-1 RCT-109	0.9381984	1.2490276	1.8380265	0.7214678	0.7880157	0.59721434	0.7880157	0.59721434	0.7880157	0.59721434	0.7880157	0.59721434	0.7880157
Phase-1 RCT-114	0.9405893	1.0121458	0.9743528	0.9814607	1.0235918	0.930606	0.9814607	1.0235918	0.930606	0.9814607	1.0235918	0.930606	0.9814607
Phase-1 RCT-115	1.2318407	1.3845695	1.8682378	1.3426814	1.1671517	1.2003523	2.660902	2.6709523	2.388944	2.4671126	3.2187433	4.626782	1.018652
Phase-1 RCT-115	0.8917656	0.9840262	0.9278642	0.9815596	1.5673363	1.6591542	1.6509347	1.8104758	1.8937194	2.0735018	1.876243	1.9107581	0.9728206
Phase-1 RCT-115	1.0493531	0.91434836	0.9376797	1.2680489	1.159625	1.4273437	1.8212805	1.5847789	1.3271519	5.7076497	5.450073	7.0909177	0.8127428
Phase-1 RCT-115	0.9596496	1.3980558	1.0095971	1.0374904	1.1167624	0.86209494	1.0504016	1.1676776	1.0786165	1.1833134	1.2480884	1.397703	1.1218534
Phase-1 RCT-115	0.99184436	0.9915919	1.0686412	0.9806594	1.1635887	1.1590638	1.5880901	1.4704001	1.4395527	1.0895343	1.0829002	1.1731511	1.1125892
Phase-1 RCT-115	1.056201	1.0780198	1.1754845	0.9158496	1.0809525	0.76320976	1.015288	1.0521551	0.9575572	0.9148248	1.068737	0.88431746	0.8580838
Phase-1 RCT-115	0.71356696	0.6559112	0.9081872	0.9493956	0.91628265	0.833407	0.8565724	1.012395	0.9567166	1.112123	1.107765	1.0559417	1.2524182
Phase-1 RCT-115	1.1578002	1.0375538	0.83612807	1.1401933	1.0731435	0.86574847	1.6422244	1.8930892	1.8502311	4.2118835	2.9238247	7.6039724	0.9217425
Phase-1 RCT-115	1.2670875	1.0057681	0.8685246	0.8172180	1.0891713	0.7256047	1.114111	1.1924927	1.0751745	0.9897415	1.022937	1.1567072	0.9315566
Phase-1 RCT-115	1.0720292	0.9723821	1.0765303	1.1710882	1.188558	1.0708501	1.898644	1.876042	2.088471	1.517676	1.9272005	2.5647674	0.9999719
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	0.9325639
Phase-1 RCT-115	0.7765935	1.054545	1.0918167	0.8395039	0.8308889	0.87103863	0.9110474	0.88470383	0.87091666	0.9954098	0.73244955	1.0301207	

Phase-1 RCT-32	1.1394076	0.9898817	0.955281	1.064799	1.0528523	1.0001633	1.2728581	0.8551754	0.6772159	0.8547766	1.8109145	1.3666526
Proteinase assembly factor 1	1.0653639	1.0212761	1.0344497	1.920707	1.2849059	1.0114478	1.229292	1.194413	1.4510068	1.1683393	1.0272114	1.604061
B-actin	1.0015395	1.0086834	0.9101519	1.153771	1.0768057	1.274111	1.3786958	1.478251	1.350742	1.2064193	1.1115209	1.0656223
Phase-1 RCT-42	0.9458508	0.907567	0.8494153	0.9242503	0.8780805	1.177113	0.9320050	0.9313716	0.9313716	0.8602635	0.8793174	0.8506064
Matrix PG	1.3169703	1.0488447	1.2082014	1.2447422	1.2052507	0.8904487	0.5789892	0.5508714	0.7351203	0.8119059	0.4578784	1.0850368
Phase-1 RCT-184	1.2107718	1.0644588	1.1325516	0.9412369	0.9412369	0.88176357	0.8802566	0.8770954	1.0490959	0.9225959	1.0245337	1.1412922
Phase-1 RCT-188	0.9742358	0.9284777	0.9121315	1.0077223	0.9935365	0.9176357	0.617829	0.2505306	0.5341207	0.5934893	0.3465458	0.7828058
Phase-1 RCT-119	0.8397615	0.9308043	1.1316528	0.9043776	0.8989813	1.149339	0.9015281	1.2253451	0.8767506	1.169292	0.6933279	1.161451
Carbonic anhydrase II	0.9102186	1.0113241	0.9043776	0.7230904	0.6989813	1.149339	0.9015281	1.2253451	0.8767506	1.169292	0.6933279	1.161451
Thyrotropin-releasing hormone	0.9612781	1.0750757	1.1083663	1.0887868	1.2817254	1.2510478	2.077554	2.004328	1.5412581	1.440956	2.30412	0.8657216
Phase-1 RCT-71	1.1628819	1.0944417	1.3854943	0.9824885	1.0507761	0.8717848	1.0018919	0.9705874	2.7460906	3.0277555	4.7050414	4.5417694
Phase-1 RCT-161	0.7543197	0.9297351	0.7980474	1.0517393	1.1341091	0.9207895	1.2744477	3.6033442	3.1778043	3.9242968	4.746027	0.8941828
Phase-1 RCT-207	0.86258175	1.0310225	0.98978347	1.190821	1.1341091	0.9207895	1.2744477	3.6033442	3.1778043	3.9242968	4.746027	0.8941828
Phase-1 RCT-144	0.913031	1.0675185	1.2196552	0.7341973	0.8196814	0.526161	1.179135	1.4160423	0.6521165	0.5427963	0.8850172	1.2687088
Phase-1 RCT-225	0.64939566	0.9270143	0.9337463	0.7480868	0.8256189	0.2725944	1.461034	1.812413	1.3057631	0.9476242	0.9056624	0.7696885
Cytochrome P450 2E1	0.73039373	0.9701947	0.9446532	1.150198	1.1771178	1.0047926	1.119518	1.612413	1.3057631	0.9476242	0.9056624	0.7696885
IDO-1	1.0591007	1.039665	1.1016148	0.9002384	0.9862174	0.9970438	1.3464538	1.5311825	1.5403085	0.8215258	1.0406017	1.0737023
Thioredoxin-1 (Trx1)	1.2127857	0.996048	1.0716466	1.2550821	1.1472393	1.0755165	0.6609843	0.63705397	0.8871653	1.0023035	1.0952692	0.90991616
Carbonic anhydrase III	1.2391126	0.7080345	0.48724124	0.6880884	0.6857855	1.1619563	0.22514413	0.04794763	0.20408759	1.052542	0.1343709	0.1308409
Phase-1 RCT-140	1.0639235	1.0202193	0.9115962	1.2117369	1.1173388	1.182235	1.1105652	1.055341	0.7778474	1.0590994	1.0857214	0.8522922
Complement component C3	1.1234728	1.2204723	1.1162806	0.91037154	0.8227164	0.59397675	0.7240708	0.581976	0.7219396	0.731761	1.4469332	1.1927941
Glucokinase	0.91854733	0.88616536	0.54751486	0.3749763	0.4271972	0.4861491	0.65117323	0.05010876	0.6162287	0.38421875	0.9972352	0.6872375
Phase-1 RCT-173	0.9008108	0.9271488	0.87576895	0.8367222	0.8113336	0.6973539	1.0022597	0.785125	1.1620129	0.9603048	1.040534	1.0474035
3-methyladenine DNA glycosylase	0.9901678	1.0041732	0.9378831	0.99485145	1.155684	1.0529334	0.78972626	0.79161495	0.85380185	1.0016917	1.2196586	1.1796415
Provisional multifunctional enzyme type II	0.8613499	0.8967698	0.8888456	1.0283419	1.0458841	0.9502671	0.5696715	0.49381352	0.8441833	0.8591224	0.9162961	0.8891984
Phase-1 RCT-40	0.93073463	0.9666205	0.74318434	0.6065776	0.529814	0.6555551	0.37482338	0.19397648	0.5128356	0.72689044	0.3825765	0.7499533
Sensonecine marker protein-30	1.0041132	1.082714	1.1555474	1.034809	0.7681639	0.7212841	0.9350305	1.7432185	1.438863	1.2571139	1.398107	1.8041399
Melanoma-associated antigen ME491	0.822859	0.971922	0.87104065	1.1788854	1.1841341	1.1468847	0.9379549	0.8719347	0.9772813	1.0578102	0.8619863	1.1781295
Phase-1 RCT-28	1.0590522	1.0733517	0.87104065	1.1788854	1.1841341	1.1468847	0.9379549	0.8719347	0.9772813	1.0578102	0.8619863	1.1781295
Eosin	1.0590522	1.0733517	0.87104065	1.1788854	1.1841341	1.1468847	0.9379549	0.8719347	0.9772813	1.0578102	0.8619863	1.1781295
Alcohol dehydrogenase I	1.3778421	0.80203944	0.5475602	1.2323134	1.415151	1.7834308	0.3923914	0.2831305	0.45201012	0.4969897	0.49633874	1.2804558
Stem cell factor	1.0026893	0.9760805	0.766192	0.5542181	0.6559404	0.6851688	1.2697924	0.91351384	0.70879054	0.57186574	0.59207384	0.81815064
IRK4 stress activated protein kinase	0.7588723	0.8511034	1.5231436	0.6559404	0.6851688	1.2697924	0.91351384	0.70879054	0.57186574	0.59207384	0.81815064	0.81815064
Protein tyrosine phosphatase alpha	0.9693373	1.0104092	0.8950894	0.9407882	0.9380453	1.558161	1.418717	1.2798378	1.3055594	0.9393976	0.7895128	0.8583389
Phase-1 RCT-35	1.0411817	0.9595241	0.9942521	0.9220764	0.8947223	0.9666337	1.121789	1.4907624	1.3323337	1.0170738	1.165746	1.3183376
Uridine cytidylating enzyme (RAD 6 homologue)	1.1891202	1.1756055	1.4245914	0.8570723	0.860294	0.8984893	0.9942982	1.247427	1.2142887	1.6077243	2.0285178	2.0989515
DNA topoisomerase I	1.0402485	1.2072841	1.3165952	0.8625739	0.821817	0.8959353	0.70204216	0.49398717	0.7758813	1.3112004	1.7509251	1.6573284
Phase-1 RCT-280	0.9381239	1.4053903	0.8843707	1.1513247	1.0118942	1.071574	0.70204216	0.49398717	0.7758813	1.3112004	1.7509251	1.6573284
Superoxide dismutase Mn	1.2704336	1.1655503	1.087198	1.1433311	0.8021525	1.0487516	2.2183022	0.9725796	1.0230223	1.0003003	1.4602893	0.8410493
Beta-tubulin, class I	1.0090874	1.2194175	1.0281593	0.89259065	0.8112711	0.53818524	0.4942259	0.9725796	1.0230223	1.0003003	1.4602893	0.8410493
Centriole phosphate synthetase I	0.9033617	1.03925	1.5657815	1.110805	0.9851443	1.0775387	1.3043387	1.0412123	1.284445	1.180212	0.845752	1.0138083
Diacylglycerol kinase zeta	0.9925108	1.0635607	0.9364257	1.110805	0.9851443	1.0775387	1.3043387	1.0412123	1.284445	1.180212	0.845752	1.0138083
Phase-1 RCT-141	0.8620839	1.1639591	1.5273542	0.8898874	1.4047105	0.6463241	0.4328237	3.715181	4.7181453	3.7894988	11.457182	5.828193
14-3-3 zeta	0.88831224	0.9489332	0.9815713	1.0571456	0.8898874	1.4047105	0.6463241	0.4328237	3.715181	4.7181453	3.7894988	11.457182
Gamma-actin, cytosolic	1.1788482	1.1376345	1.2409483	0.8074893	0.6625568	0.57182166	1.073354	1.5375148	1.5488878	1.0906228	1.399437	1.5402387
Ribosomal protein L13A	0.6232843	1.1162372	1.1584325	0.8765837	0.99259883	0.88786124	1.2140301	1.2934426	1.3171009	1.1635101	1.8168858	1.5273411
IR-3	0.8275622	1.0636709	0.98003566	0.7738352	0.7285555	0.7285555	0.88487864	1.178215	1.123677	1.047463	1.2811394	1.1432769
Phase-1 RCT-45	1.214214	0.990854	1.426122	1.181636	1.3632289	1.2637658	1.094024	0.9382915	1.0132	1.570903	1.2304034	2.1007747
Gln	1.2789336	0.9438312	0.9767608	1.291357	1.3390051	1.3398828	2.3322034	1.587437	1.4034382	3.9854562	3.0143523	4.0091334
Protein O-mannosyltransferase 1 (Pom1)	1.1557515	1.4288309	1.2864233	1.01308	1.214981	0.9774893	1.112774	1.0605538	0.9908673	1.092023	1.309892	1.1824968
HMG CoA reductase	0.9004526	1.0774677	0.9763052	1.043022	1.0138453	0.9365325	0.8724688	0.87164363	0.75185287	1.1858287	1.0171633	1.9237344
Phase-1 RCT-12	1.1095262	1.0760605	1.4490266	0.8705653	0.9528822	0.7754328	0.9790087	1.0054923	1.0194283	0.990519	0.9799207	0.9576804
Interferon related developmental regulator IFRD1 (PC4)	0.9288757	1.0345532	1.0207139	0.76559826	0.8494688	0.77965303	1.5989315	1.3303684	1.3200082	1.1191834	1.2424812	1.5277249
Glucose-regulated protein 78	1.039274	1.1687069	1.1595852	0.7447172	0.935568	0.8710874	0.835568	0.3821078	0.6943343	1.2995884	0.9074223	1.080736
3-hydroxyisovaleryl-CoA dehydrogenase (HSD3B1)	1.0592923	1.0123714	1.0091615	0.8067232	1.0016026	0.85530626	0.8239129	0.63119555	0.8566894	0.970759	1.0063759	1.0148593
Caspase 6	0.9377723	0.9586347	0.9224906	0.87074665	1.22215	1.307352	1.22215	1.05369126	1.0898496	1.0898496	1.2568474	1.0951895
Phase-1 RCT-169	1.1343165	0.94899225	0.81445616	1.324167	1.2558181	1.2609585	1.1902387	1.208126	3.927152	5.934583	0.86355704	1.041386
Phase-1 RCT-197	0.8663242	0.8510896	1.0363345	0.81384393	1.0090666	0.9463343	1.422632	1.318595	1.1258909	1.0638589	1.099802	0.8287582
Phase-1 RCT-34	1.2224481	1.0921093	1.1345469	1.2246236	0.9222236	0.9998194	0.4574576	0.881638	0.6764618	0.85102017	0.89815445	1.0807405

Table 28

Phase-1 RCT-22	0.826894	0.838438	0.937028	1.020722	1.047494	1.553704	1.241758	1.067193	0.964597	0.9828149	0.95188737	0.8207147	0.8653496
Phase-1 RCT-23	0.842434	0.867708	1.215324	1.093449	0.987743	2.001362	2.464535	2.474455	2.019285	3.5376808	2.8993672	2.916856	1.2529161
Phase-1 RCT-24	0.847233	1.13565	1.2485912	1.19597	1.286908	0.4284562	0.374944	0.796359	0.7442755	0.7780544	0.64716347	0.7194529	0.7637417
Phase-1 RCT-25	0.852439	0.946334	0.946334	1.007711	1.060741	1.259957	1.1887141	1.0712765	1.2249712	0.9928805	1.2381337	1.0247147	1.0427147
Phase-1 RCT-26	0.8617204	1.1884691	1.1474458	1.984572	1.3397264	1.3597264	0.37498205	0.33981193	0.37314722	0.6841877	0.68713522	0.98000383	1.0545167
Phase-1 RCT-27	0.9249553	1.7037874	1.9203876	1.412832	0.35028676	1.142832	0.35028676	0.51690051	0.35670143	0.8714852	0.84040033	0.58771763	1.271656
Phase-1 RCT-28	0.9388179	1.1180589	0.9201166	1.0082476	1.150429	0.7581877	0.7532387	0.7532387	0.6996155	1.2321634	1.0693164	1.186212	1.050504
Phase-1 RCT-29	1.0777212	0.881675	1.1765556	0.9267603	1.0552487	1.0552487	1.0552487	1.0552487	1.0552487	1.0552487	1.0552487	1.0552487	1.0552487
Phase-1 RCT-30	1.081927	0.8927635	0.9378925	0.9378925	1.3371501	1.3993447	1.463314	1.7060145	1.1745164	0.9204731	0.7674401	0.7674401	0.7674401
Phase-1 RCT-31	1.2854339	0.85221223	0.9799881	1.1314512	1.1878468	1.2844223	1.0764984	0.9357978	1.3357578	1.15007	1.2004733	0.91398126	1.0712558
Phase-1 RCT-32	0.96520095	0.89827123	1.3242968	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253	0.9688253
Phase-1 RCT-33	1.068701	0.8737946	0.9360956	1.3139684	0.8701812	1.2507841	1.5543843	0.3427768	0.761481	1.08214875	1.08214875	1.08214875	1.08214875
Phase-1 RCT-34	1.2529302	1.140562	1.2213635	1.0069344	1.063776	1.063776	1.063776	1.063776	1.063776	1.063776	1.063776	1.063776	1.063776
Phase-1 RCT-35	1.0379228	1.263749	0.7680306	1.025662	0.794391	1.0437231	1.3502339	0.92479845	0.7739597	1.07180645	0.827816	1.039369	1.005556
Phase-1 RCT-36	1.157483	0.9529834	1.0716849	1.2784011	1.008162	1.0366457	0.5822669	0.7744293	0.4858193	0.8397687	0.8318478	1.3910139	1.1970913
Phase-1 RCT-37	0.812849	0.840219	0.8924526	0.8742187	0.7425821	0.7425821	0.7425821	0.7425821	0.7425821	0.7425821	0.7425821	0.7425821	0.7425821
Phase-1 RCT-38	0.975782	0.9756335	1.004325	1.0035151	0.9356394	0.7633045	0.8169176	0.9313472	0.76370556	0.9782011	1.1854889	1.0625779	1.0766524
Phase-1 RCT-39	0.9544707	0.935752	1.0144585	1.0242252	0.9495322	0.98549014	0.5004462	0.5986173	0.59505333	0.7695997	0.64978535	0.5450071	1.2005601
Phase-1 RCT-40	0.9687539	0.87124566	1.0469014	0.8104443	0.8606908	0.6686982	0.74048865	0.74048865	0.3074164	1.0098763	0.9469464	0.84607605	0.8583457
Phase-1 RCT-41	1.0293576	1.0778346	0.9282708	1.205826	1.2576586	1.3539481	1.2454151	1.3071941	1.0440663	0.9804935	1.0204212	1.0082229	1.2665311
Phase-1 RCT-42	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-43	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-44	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-45	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-46	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-47	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-48	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-49	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-50	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-51	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-52	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-53	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-54	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-55	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-56	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-57	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-58	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-59	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-60	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-61	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-62	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-63	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-64	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-65	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-66	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-67	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-68	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-69	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-70	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-71	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-72	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-73	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-74	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-75	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-76	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-77	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-78	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-79	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-80	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-81	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-82	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-83	0.7827371	0.80645955	1.1168623	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708	1.0268708
Phase-1 RCT-84	0.7827371	0.80645955</											

Table 28

Phase-1 RCT-3	1.1422381	0.9731918	0.9059333	1.0744514	1.1681875	1.1702262	1.0291104	0.9137565	1.055478	0.8651286	1.0118534	0.8448659	1.0138573	0.91641825
Felitin beta (Feub)	0.8892115	0.8072974	1.1727606	1.2176603	1.1091228	1.1311313	0.5284059	0.4532424	0.7380205	0.801478	0.944035	0.783945	1.0290033	1.0083946
3-hydroxyisovalerate dehydrogenase	0.8726288	0.9102200	1.0820218	0.9184578	0.8578319	1.0033944	0.3442121	0.3911542	0.5915542	0.7011480	0.5840247	0.5288822	0.94717958	0.7680774
Carbonic anhydrase III, sequence 2	0.7575489	0.8346953	0.8595333	1.2140911	1.2089181	1.0930477	0.3284878	0.3284878	0.5946427	0.76267615	0.7077563	0.7466804	0.90538865	
Phase-1 RCT-10	1.3013035	0.8551088	0.9911709	1.0215541	1.0422574	1.0646402	0.3706359	0.2871332	0.3966665	0.1183914	0.4246634	0.1024018	1.0273541	0.7021677
Alpha-2-macroglobulin	1.1867441	1.1275846	0.9018332	0.8944369	0.8716299	1.5451012	0.4862323	0.21351078	0.563824	0.4618651	0.48290632	0.6152695	0.72438234	0.5728859
Dynamin-1 (D100)	0.8502335	0.8372554	0.9052854	1.1336864	1.1303132	0.5621132	0.5621132	0.5621132	0.50925463	0.80685487	0.9136083	0.59103817	0.9069206	0.7884968
Leu	1.0345438	0.9673987	0.8119867	1.224237	1.4905464	1.540755	0.8503063	0.8638014	0.7298113	1.037748	0.8890021	0.7804682	0.8581171	0.7103228
Phase-1 RCT-252	0.63203825	0.8507308	1.2435949	1.0562801	0.8664634	1.0890473	0.84503063	1.3630141	1.2574004	0.3353903	1.2204478	0.93612515	1.1911497	0.81532687
Phase-1 RCT-29	0.8020153	1.0032385	1.0459249	1.1105569	1.1728984	0.8084921	0.8582985	0.8755265	0.8624009	1.0380914	0.9430063	0.7233657	0.9138375	0.84517384
Phase-1 RCT-278	0.9304341	1.0073723	1.1692192	1.0545942	0.8400544	0.8084921	0.8582985	0.8755265	0.8624009	1.0380914	0.9430063	0.7233657	0.9138375	0.84517384
Phase-1 RCT-42	0.9933554	0.9625588	1.0191982	1.0455017	1.0455017	0.8378168	0.3882324	0.8719221	0.8330827	0.8473488	0.877512	0.9073016	0.7634009	1.083201
Phase-1 RCT-25	0.87668708	0.9320811	1.020065	1.0020609	0.96386016	1.0768589	0.923768	0.8721065	0.7010721	0.8315551	0.8683038	0.9280133	0.826405	
Cytidine P450 2C11	0.8945824	0.6823944	1.020068	1.152223	1.2047955	1.5118407	0.9383768	0.9671807	0.7108007	0.4818845	0.6540458	0.8278515	1.0439941	0.7147885
Phase-1 RCT-202	1.2692984	1.2037691	1.2401667	0.9327974	0.9773727	0.8090807	0.8094149	0.6993452	0.55542155	0.888451	1.0439941	0.8278515	1.0439941	0.7147885
Complement factor 1 (CF1)	1.1899593	1.1482853	1.354283	0.707026	0.8085977	0.8094149	0.6993452	0.55542155	0.888451	1.0439941	0.8278515	1.0439941	0.8278515	0.7147885
Proliferating cell nuclear antigen gene	0.98920596	1.0091459	0.9085991	1.3036784	1.154817	1.3424358	1.1728984	0.8087356	0.8787235	1.1831771	1.1203165	1.1143994	0.9567335	1.0532627
Activating transcription factor 3	0.9526345	0.9992553	0.9460166	1.2127811	1.1242064	1.2143363	0.8540494	0.8087356	0.8787235	1.1831771	1.1203165	1.1143994	0.9567335	1.0532627
Adhesion kinase (pp125FAK)	0.83911735	0.9397891	0.8656557	0.9151267	1.0396539	1.0989453	0.9856671	0.560943	0.5681171	0.7363065	0.913278	1.3863394	0.2898757	0.8269906
Phase-1 RCT-289	0.7444939	0.88730943	0.84607	1.0276419	1.0321673	1.2826955	1.1382173	1.281267	1.733065	0.5681171	0.7363065	0.913278	1.3863394	0.2898757
Phase-1 RCT-269	0.8313458	1.0164447	0.9817814	1.0321673	1.2826955	1.1382173	1.281267	1.733065	0.5681171	0.7363065	0.913278	1.3863394	0.2898757	0.8269906
Interleukin-1 receptor type 1	1.1581432	1.0244181	1.0808084	0.9948335	0.8113191	0.96945514	0.6414047	0.53166674	0.5725868	0.78151923	0.4880847	0.78151923	0.4880847	0.5725868
MHC class II antigen RT1-LA10 alpha-chain	0.9798466	1.1782324	1.221868	1.453495	1.601518	1.176262	1.452018	1.2717278	1.4238466	1.9502671	1.8834743	2.6017783	1.2350507	1.8108252
Aryl sulfatase	0.8427239	0.9520236	1.385539	0.8494584	0.8240887	0.875543	0.5789882	0.5507506	0.6238673	0.8316544	0.9421171	0.5798058	1.0354035	0.8758316
Phase-1 RCT-171	0.8683948	0.9327262	0.9433051	1.0549871	1.047105	1.1351195	0.8148555	0.8520142	0.860041	0.8764432	0.8568381	0.740055	0.9834735	0.961523
Phase-1 RCT-83	0.8604357	0.8750098	0.8744843	0.7879383	0.86244814	0.9137385	1.0445007	1.0661041	0.9074893	0.4360581	0.3087258	0.3759476	0.5298319	0.761461
Phase-1 RCT-270	1.1687849	0.8694931	0.8844253	0.95977813	0.73392564	0.9525178	0.3805248	0.3067483	0.4360581	0.3087258	0.3759476	0.5298319	0.761461	
Colony-stimulating factor-1	1.028156	1.0678892	1.1674466	0.8585217	0.6576027	0.7292908	0.7310072	0.8904043	0.9377216	0.8535381	1.1305794	1.050627	0.9638224	0.764951
N-cadherin	0.7700651	0.8687323	0.822072	1.002831	0.876824	0.80478793	1.242682	0.597089	0.55168133	0.6314842	0.8571193	0.4501355	1.0203068	0.7430721
Phase-1 RCT-42	0.7732325	0.8384971	0.9161526	1.2096685	1.1467674	1.242682	0.597089	0.55168133	0.6314842	0.8571193	0.4501355	1.0203068	0.7430721	
Phase-1 RCT-22	0.7553966	1.017448	0.9958779	0.9298887	0.875627	0.9593777	0.9593777	0.9593777	0.9593777	0.9593777	0.9593777	0.9593777	0.9593777	0.9593777
AT-3	0.92765828	0.85231805	0.8310506	0.92180115	1.0671057	1.024556	1.050334	1.050334	1.050334	1.050334	1.050334	1.050334	1.050334	1.050334
Phase-1 RCT-18	0.89249665	0.85712513	1.0750384	1.0255771	1.1607585	1.4343021	1.043589	1.0540371	1.0813061	0.9127684	0.8315095	0.873788	0.9405958	0.9661305
Phase-1 RCT-123	0.8392551	0.87068585	0.8487685	1.1891154	1.1339612	1.1339612	0.8634406	0.6162542	0.9265332	1.1748255	1.0117396	1.05714577	0.9712858	
Phase-1 RCT-56	1.1680657	0.9174293	1.0302451	0.9300705	0.9414328	0.91971105	0.5487855	0.6258286	0.5988054	0.874333	0.50149345	0.36451775	1.10714275	0.9695933
Equilibrative nucleobenzylthiosine-sensitive nucleoside transporter	0.8931985	0.8494519	0.8038206	1.0255846	0.7445184	0.7546383	0.50714403	0.51755937	0.6827451	0.6166876	0.47448	0.58978334	0.874835	0.5577696
Glucose transporter 2	0.8823441	1.1803335	0.81132486	1.107205	0.8752954	0.91807344	1.2871909	1.2859297	1.1019565	1.1603679	1.4050467	1.243526	1.3164915	0.7765832
Mitochondrial protein-2	0.9618973	0.9805008	1.2441146	0.9400484	0.927845	1.3215843	1.5792865	1.5688852	2.148354	6.017208	3.8472168	2.533758	0.9854019	1.1670592
Mitochondrial protein-1	0.9374835	1.0876801	1.2795151	0.9132018	0.906092	1.3235102	1.454185	2.3355112	3.0554683	6.386138	5.6841407	2.9707875	1.0194755	1.2442843
Phosphatidylethanolamine-binding protein	1.2572047	1.1342717	1.1596977	1.036868	1.025887	1.3351916	0.9007095	0.7966006	0.8803883	1.4302558	2.807552	1.5345566	1.0804117	1.047569
Phase-1 RCT-180	0.8947866	1.0847859	1.27374	1.0843438	0.9586476	0.7002895	1.1841048	1.2478239	1.3225394	1.5031159	1.9234632	1.8028817	0.81803766	0.80662173
Interleukin beta-4	1.0740211	1.0815882	0.8532565	1.0373657	1.2357535	1.8114	1.3328949	1.2915404	1.2161988	1.03141	1.0146214	1.0095758	1.0486959	1.0771
NADPH cytochrome P450 oxidoreductase	1.468453	1.7011019	2.535925	1.0743057	1.164354	1.2597175	1.16724	1.397461	1.05149	0.846653	0.893383	1.0534692	1.6250702	2.008534
Waf1	1.0623854	1.0085387	0.8164891	1.1248941	1.1657095	1.3871688	1.7318187	1.7849732	1.3788563	1.2658282	1.4603977	0.95863047	0.8715863	
Endogenous retroviral sequences, 5' and 3' LTR	0.7114831	1.0412842	1.0765393	0.9482074	0.9620972	0.85020436	0.9389726	0.8342035	0.9717859	0.63140035	0.8076537	1.2743945	1.2354619	1.4847387
Phase-1 RCT-53	0.90475805	0.97346267	1.0248792	0.9412326	0.9852069	0.91664287	1.0085388	1.0995237	0.94854975	1.0555828	1.1372658	1.0967347	1.0208992	1.133208
Phase-1 RCT-44	1.0068713	1.1263027	0.957535	0.9460522	1.0183752	0.9903582	1.3408613	1.3828286	1.0203179	1.0202395	1.3678962	1.3439006	0.9795902	0.8664755
Phase-1 RCT-240	0.9933922	1.0790085	0.8712104	0.957707	0.9033078	0.7754485	1.4947039	1.4187905	0.98984455	1.2611762	1.293867	1.3518854	1.2361711	1.47938
Oscoprotein	1.0893035	1.2283897	1.5341511	0.8199865	0.852495	0.80757797	0.7754485	1.4947039	1.4187905	0.98984455	1.2611762	1.293867	1.3518854	1.2361711
Organic anion transporting polypeptide 1	1.062709	1.0011588	0.9924135	1.1886162	0.9270473	1.1904609	0.92314625	0.85627625	1.248945	0.70870483	0.8971223	0.8161718	1.3617836	1.2655335
Phase-1 RCT-241	0.9711234	1.4115382	1.0927584	1.2145305	1.4504385	1.0925705	0.381172	0.9669005	7.333333	10.740194	20.690695	0.8950841	1.0611881	
Tissue factor pathway inhibitor	1.1438986	1.0489139	0.961094	0.973361	1.1445111	1.172163	1.3688844	1.2173411	1.2686533	1.5385135	1.3805463	1.3803328	1.0051888	0.9688668
Cyclin-dependent kinase 4 inhibitor P27kip1 (alternate form)	1.0150595	1.2392886	1.2354411	1.0884552	1.2397684	1.097322	1.92298	2.4149342	2.124245	1.8354897	2.0044148	2.1975	1.208373	1.8264965
Phospholipase D	1.0057824	1.139464	0.84471726	0.95190378	2.6438822	1.2815254	1.35748	1.2022247	1.1510257	0.9708194	0.85822674	1.2363542	0.142072	1.9588272
Phase-1 RCT-39	0.8144579	1.0568424	1.1561276	1.0188938	1.033314	0.8608234	2.0104638	1.8651608	1.3624818	2.5527413	1.8035318	3.7262621	0.97219125	1.300387
Phase-1 RCT-258	1.1652151	1.1084135	1.1458973	1.0807785	1.0897572	1.1788287	1.250168	1.310102	1.333414	1.9473325	1.5561515	0.9742665	1.2163366	1.3103007
Phase-1 RCT-113	0.653385	1.1541713	1.1939532	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713	1.1541713
Adenosine nucleoside translocator 1	0.9673047	1.0209748	0.8429897	0.7855468	0.832155	0.827567	1.2187184	1.0884919	1.2291195					

Organic cation transporter 3	0.85417356	0.8509718	1.386498	0.6767932	0.8319373	0.617214	1.181572	1.2196657	1.3903166	1.2023584	1.8117698	1.8012406	0.86018675	0.82486533
Hypoxia-inducible factor 1 alpha	1.2035533	1.2784824	1.0129552	1.1276222	1.1439102	1.1801338	1.3128605	1.3411768	1.0396597	1.3518163	1.477111	1.6717621	1.0428373	1.1540596
Phase-1 RCT-43	1.0306323	1.2271686	1.0185292	0.9097441	0.8717761	0.8007717	1.1063986	1.3280037	1.4971082	1.374172	1.4428557	1.9434388	1.046436	1.1948143
Phase-1 RCT-46	1.0615119	1.2178372	1.0133441	0.9814718	0.99120957	0.8459142	1.1010642	1.1865029	0.9876881	0.8456555	0.8973235	0.9003658	0.868393	0.94739455
Mitochondrial cytochrome c oxidase, cytochrome c	0.90273275	0.9103273	1.8265707	0.939088	0.71012187	0.7341807	0.5033197	0.45785529	0.57295377	0.98122823	0.8342987	0.9309433	0.8575673	0.8924324
V30 element	0.89861035	0.7250477	1.0768445	0.9493821	0.9866524	0.30481562	1.001755	0.87008154	1.4787298	0.78183174	0.6884462	0.90064037	1.088706	1.1420548
Phase-1 RCT-189	1.131817	1.0012103	1.0593268	1.3008734	1.1671093	1.4089048	0.5980087	0.47882652	0.6388861	0.96354225	0.93359153	0.754526	1.087782	0.90867806
Alpha-fetoprotein	0.9673724	1.0300446	0.8249416	0.9650452	0.8800505	1.359508	0.9583612	1.0772805	1.104028	0.997001	0.8507846	0.9970176	0.8865309	0.77783704
Calgranulin B	0.9773816	0.9804831	1.0367721	0.8249118	0.90461355	1.27214	0.50395346	0.36402673	0.65744597	0.8678796	0.8184285	0.7234528	0.6940537	0.59505807
Tissue plasminogen activator	0.93028847	0.9031077	0.93141333	0.898385	1.0202966	1.0375171	0.9947151	0.8241742	0.92610073	0.8396912	1.1691029	1.542196	0.94790757	0.94010216
Phase-1 RCT-195	1.2019813	1.060084	1.243377	0.9172371	0.92324195	0.6893488	0.63619906	0.60529886	0.66997206	0.8396912	1.1691029	0.94790757	0.94010216	0.94010216
Liver fatty acid binding protein	1.1527981	1.018147	1.2130249	1.287336	0.98716456	0.95951074	0.5046398	0.27977642	0.5910113	0.9560704	0.8913384	0.8913384	0.8673918	0.9788305
Alpha-1 microglobulin/bikunin precursor (Amp)	0.91963968	0.90947987	0.9597167	0.9021517	0.9269867	0.91634935	0.5855872	0.468505	0.7953136	0.9560704	0.8913384	0.8913384	0.8673918	0.9788305
Phase-1 RCT-294	0.9588433	0.89133114	1.231582	1.0162543	0.8615782	0.9023168	0.9033704	0.478468	0.7810822	1.1819122	1.1768076	1.335784	0.8228207	0.84660639
Phase-1 RCT-151	1.0482938	1.0919879	0.8407727	1.3267965	1.4191161	1.28687	1.3115501	1.3027364	1.0541693	0.9698536	0.8398817	0.8297918	0.9583955	1.088921
Phase-1 RCT-158	0.88695654	1.0090134	1.1305184	0.87795678	0.9119122	0.762242	0.8988628	1.117518	0.9522474	1.1702023	1.0630688	1.0842638	1.0972105	1.2254709
Phase-1 RCT-221	0.82238944	1.1053965	1.178795	0.8541992	0.84768236	0.85411968	1	1.0643	0.8903808	1.190444	1.0721369	0.97580346	0.98187353	1.196438
Phase-1 RCT-235	0.9101939	0.96071895	0.80730534	1.151909	0.8906627	1.8443311	1.2474333	1.0983318	1.2080693	0.72485775	0.6534805	0.7115784	1.3500048	1.168321
Organic anion transporter 3	0.81689014	0.90973093	1.1867009	1.010953	0.94322777	0.95396813	0.88935184	1.011685	1.1912407	1.4351728	2.035382	0.8716346	1.68073	2.168814
Matrix metalloproteinase-1	1.6610728	1.127961	1.1706344	0.9528336	0.94528833	0.9305328	0.59432524	0.73296575	0.6525193	0.8359442	0.8716346	0.7241975	0.7547575	0.63739555
Urinary protein 2 precursor	1.1306477	0.99458015	1.0897845	1.0095264	1.0338788	0.9202671	0.9132224	0.89097695	0.9327826	0.86229055	0.86368354	0.86229055	0.86229055	0.86229055
Phase-1 RCT-212														
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=neer, necrosis observed; yes=both, necrosis with inflammation observed; no, no inflammation observed														
(5) Predictive gene (as in Table 18 and as included in Table 28)														

Table 28

Table 28

[illegible]

Phase-1 RCT-132	0.8468775	0.8940812	0.9943286	1.1911687	1.5274721	1.2821956	0.8058317	1.0746735	1.2124034	1.299327	0.8413243	0.8558117	1.2387833	1.0780532
Proteinase assembly factor 1	1.5325046	1.4200673	1.2511918	1.3467733	1.2074499	1.1048466	1.2103531	1.1293222	1.1293222	1.2573432	1.1812778	1.2121663	1.025551	
Proteinase assembly factor 2	1.3216433	1.4300897	1.0212371	0.9585340	1.0740162	1.0355677	0.9892436	0.9589791	0.9589791	1.0811014	0.8115244	0.8821058	0.9256628	
Proteinase assembly factor 3	1.427218	1.093335	1.0921866	0.8924628	0.9615310	0.8937654	0.9897944	0.8419494	0.8419494	1.0022035	1.0724455	1.1134445	0.9368863	
Proteinase assembly factor 4	1.0747219	1.1532036	0.9912416	0.7919156	0.81583047	0.81583047	0.81583047	0.81583047	0.81583047	0.81583047	0.81583047	0.81583047	0.81583047	
Proteinase assembly factor 5	1.0073862	0.9783432	0.8635478	0.8688885	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	
Proteinase assembly factor 6	0.648455	0.7139157	0.5982024	0.5144775	0.6373214	0.6988438	0.9881823	0.9305874	0.9305874	0.9493972	0.8540879	0.7671047	0.82018	
Proteinase assembly factor 7	0.91775626	0.8592046	1.004354	1.042591	0.9217607	1.0017986	0.8907099	0.821719	0.821719	0.821719	0.821719	0.821719	0.821719	
Proteinase assembly factor 8	1.08576	0.5240366	1.220245	0.6982716	0.8483857	0.6982716	0.6982716	0.6982716	0.6982716	0.6982716	0.6982716	0.6982716	0.6982716	
Proteinase assembly factor 9	0.94030154	0.758134	1.0477817	0.9742642	0.800692	1.0130888	0.9740405	0.8744866	0.8744866	0.8744866	0.8744866	0.8744866	0.8744866	
Proteinase assembly factor 10	0.98412355	1.053451	1.255167	1.119555	1.1681427	1.1653315	1.1954005	1.0130888	1.0130888	1.0130888	1.0130888	1.0130888	1.0130888	
Proteinase assembly factor 11	0.600083	0.974637	0.7077774	1.008307	1.078361	1.8419836	0.6547936	0.7407853	0.7407853	0.7407853	0.7407853	0.7407853	0.7407853	
Proteinase assembly factor 12	1.494917	0.8145306	0.8551137	0.9303367	0.6540847	0.4121334	0.6094575	0.7814521	0.7814521	0.7814521	0.7814521	0.7814521	0.7814521	
Proteinase assembly factor 13	1.315719	1.3795777	1.3000937	1.4803685	1.154239	1.232066	1.232066	1.232066	1.232066	1.232066	1.232066	1.232066	1.232066	
Proteinase assembly factor 14	1.0168767	1.0562966	1.060649	1.040446	1.3902147	1.518947	1.2960567	1.2960567	1.2960567	1.2960567	1.2960567	1.2960567	1.2960567	
Proteinase assembly factor 15	1.1373031	0.9505011	0.78408524	0.6127531	1.349439	1.4222478	1.3610284	0.802034	0.802034	0.802034	0.802034	0.802034	0.802034	
Proteinase assembly factor 16	1.0073862	0.9783432	0.8635478	0.8688885	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	1.0077202	
Proteinase assembly factor 17	0.5902526	0.5843836	0.5954781	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	0.8424572	
Proteinase assembly factor 18	1.059492	0.9622516	1.1492183	0.8907916	1.2017941	1.0905391	0.9930104	1.029698	1.029698	1.029698	1.029698	1.029698	1.029698	
Proteinase assembly factor 19	0.83506154	0.993747	0.86539125	0.8606149	0.9305785	1.1818585	0.9305785	0.9305785	0.9305785	0.9305785	0.9305785	0.9305785	0.9305785	
Proteinase assembly factor 20	0.91983374	0.1282455	0.2656025	0.6223813	0.4942864	0.15160146	0.3876772	0.3471099	0.3471099	0.3471099	0.3471099	0.3471099	0.3471099	
Proteinase assembly factor 21	0.9851213	0.974722	1.0555718	0.597138	0.8871017	1.106567	1.0381336	0.9988814	0.9988814	0.9988814	0.9988814	0.9988814	0.9988814	
Proteinase assembly factor 22	0.66529123	0.986374	0.6547965	0.597138	0.8871017	1.106567	1.0381336	0.9988814	0.9988814	0.9988814	0.9988814	0.9988814	0.9988814	
Proteinase assembly factor 23	2.2850378	0.479833	1.305635	0.5806245	0.650741	0.9114418	1.2507352	0.9970285	0.9970285	0.9970285	0.9970285	0.9970285	0.9970285	
Proteinase assembly factor 24	1.478466	1.075616	1.1884288	0.933708	0.865504	0.9051355	0.88914623	0.9022566	0.9022566	0.9022566	0.9022566	0.9022566	0.9022566	
Proteinase assembly factor 25	1.310243	0.9635718	0.9120383	0.9786643	1.0439043	1.101718	1.0142903	1.1292478	1.1292478	1.1292478	1.1292478	1.1292478	1.1292478	
Proteinase assembly factor 26	0.636024	0.8805889	0.6912033	0.573148	0.8237954	0.7140365	0.8344757	0.8212854	0.8212854	0.8212854	0.8212854	0.8212854	0.8212854	
Proteinase assembly factor 27	0.6954024	0.6525125	0.8954462	0.3691163	0.7776007	0.8861045	0.88033653	0.56284166	0.56284166	0.56284166	0.56284166	0.56284166	0.56284166	
Proteinase assembly factor 28	1.463171	0.3505011	0.30408564	0.3591163	0.7776007	0.8861045	0.88033653	0.56284166	0.56284166	0.56284166	0.56284166	0.56284166	0.56284166	
Proteinase assembly factor 29	1.4873523	1.1576024	1.4068508	0.8641678	0.912296	0.7611133	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	
Proteinase assembly factor 30	0.9603549	0.9707178	0.8676766	0.8641678	0.912296	0.7611133	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	
Proteinase assembly factor 31	1.050478	0.912296	0.7611133	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	0.929748	
Proteinase assembly factor 32	0.83432305	0.0761061	0.1615053	0.150502	0.046068	0.073744	0.073744	0.073744	0.073744	0.073744	0.073744	0.073744	0.073744	
Proteinase assembly factor 33	0.82161784	0.823734	0.52773976	0.6719592	0.778714	1.0733338	1.3468822	1.1541363	1.1541363	1.1541363	1.1541363	1.1541363	1.1541363	
Proteinase assembly factor 34	0.7097413	0.4586776	0.8538918	0.5466166	0.5695542	0.879533	0.9902129	0.7805501	0.7805501	0.7805501	0.7805501	0.7805501	0.7805501	
Proteinase assembly factor 35	0.726699	1.0388328	0.8538918	0.5466166	0.5695542	0.879533	0.9902129	0.7805501	0.7805501	0.7805501	0.7805501	0.7805501	0.7805501	
Proteinase assembly factor 36	1.1941772	1.0023568	1.2398766	0.9335305	0.652332	0.7143834	0.8026058	0.8237344	0.8237344	0.8237344	0.8237344	0.8237344	0.8237344	
Proteinase assembly factor 37	1.5679711	0.9830617	1.2717855	1.1327554	0.9876876	0.94015074	1.0778053	0.8237344	0.8237344	0.8237344	0.8237344	0.8237344	0.8237344	
Proteinase assembly factor 38	0.6383004	0.952878	0.90971357	1.0861177	1.0255228	1.6217974	1.4206741	1.8214389	1.8214389	1.8214389	1.8214389	1.8214389	1.8214389	
Proteinase assembly factor 39	0.057418	0.7260371	0.674491	0.68491514	0.9285183	0.9135633	0.844517	0.8335333	0.8335333	0.8335333	0.8335333	0.8335333	0.8335333	
Proteinase assembly factor 40	0.8703946	0.8787721	0.8471804	0.8787559	0.9135633	0.844517	0.8335333	0.8335333	0.8335333	0.8335333	0.8335333	0.8335333	0.8335333	
Proteinase assembly factor 41	1.0623965	0.2765156	1.0854034	1.2016598	1.3657142	1.5930563	1.5854395	1.5509271	1.5509271	1.5509271	1.5509271	1.5509271	1.5509271	
Proteinase assembly factor 42	0.70760435	1.0196278	1.026098	0.9380937	1.003101	1.4135209	0.9034575	0.9851397	0.9851397	0.9851397	0.9851397	0.9851397	0.9851397	
Proteinase assembly factor 43	0.792707	1.3561543	1.2397512	1.346541	1.7366246	1.3227894	1.0081482	1.251688	1.251688	1.251688	1.251688	1.251688	1.251688	
Proteinase assembly factor 44	0.9518677	0.9881345	0.8494298	1.346541	1.7366246	1.3227894	1.0081482	1.251688	1.251688	1.251688	1.251688	1.251688	1.251688	
Proteinase assembly factor 45	1.0572102	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	1.017746	
Proteinase assembly factor 46	0.9518677	0.9881345	0.8494298	1.346541	1.7366246	1.3227894	1.0081482	1.251688	1.251688	1.251688	1.251688	1.251688	1.251688	
Proteinase assembly factor 47	1.770277	0.9168004	1.0546544	1.0989333	1.8559344	1.7366246	1.3227894	1.0081482	1.0081482	1.0081482	1.0081482	1.0081482	1.0081482	
Proteinase assembly factor 48	0.8524656	0.9595935	1.0418123	1.0482745	1.0270536	0.98509785	1.1886566	1.334231	1.334231	1.334231	1.334231	1.334231	1.334231	
Proteinase assembly factor 49	1.7493815	1.3491628	1.4397356	1.3280704	1.0482745	1.0270536	0.98509785	1.1886566	1.1886566	1.1886566	1.1886566	1.1886566	1.1886566	
Proteinase assembly factor 50	2.2408882	1.5425799	1.8548172	2.210535	1.2210535	1.2210535	1.2210535	1.2210535	1.2210535	1.2210535	1.2210535	1.2210535	1.2210535	
Proteinase assembly factor 51	1.3841608	1.5890355	1.8828046	2.5646958	1.8828046	1.8828046	1.8828046	1.8828046	1.8828046	1.8828046	1.8828046	1.8828046	1.8828046	
Proteinase assembly factor 52	1.7843411	1.2977692	1.294008	1.3010964	0.94895747	1.1871002	1.2142426	1.1568855	1.1568855	1.1568855	1.1568855	1.1568855	1.1568855	
Proteinase assembly factor 53	1.2503028	1.159125	1.044356	1.2275346	1.0948218	1.1871002	1.2142426	1.1568855	1.1568855	1.1568855	1.1568855	1.1568855	1.1568855	
Proteinase assembly factor 54	0.791119	1.1207484	0.900888	1.4844143	1.0364828	1.1643105	1.3609716	1.3141092	1.3141092	1.3141092	1.3141092	1.3141092	1.3141092	
Proteinase assembly factor 55	0.74562144	1.0021191	0.5381894	0.7622467	2.0916882	3.0012345	2.1659332	3.4459823	3.4459823	3.4459823	3.4459823	3.4459823	3.4459823	
Proteinase assembly factor 56	0.7089165	0.7348127	0.6715015	0.7036327	0.4880432	0.5953647	1.1849707	1.2548198	1.2548198	1.2548198	1.2548198	1.2548198	1.2548198	
Proteinase assembly factor 57	1.0309888	1.346287	1.2345763	1.0807853	0.8807853	0.8807853	0.8807853	0.8807853	0.8807853	0.8807853	0.8807853	0.8807853	0.8807853	
Proteinase assembly factor 58	1.3507943	1.0017865	1.2805185	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	0.9445679	
Proteinase assembly factor 59	0.9800859	0.9506702	0.96763394	1.1544585	1.119661	1.121862	0.93716157	1.1338566	1.1338566	1.1338566	1.1338566	1.1338566	1.1338566	
Proteinase assembly factor 60	1.3272723	1.028192	1.0616019	0.77224004	0.7807988	0.700376	0.70067215	0.7539919	0.7539919	0.7539919	0.7539919	0.7539919	0.7539919	

Phase-1 RCT-72	1.1775148	0.90421224	1.2450476	0.9305636	0.930736	0.871094	0.8858974	0.882441	0.8240595	0.82430714	1.126518	1.2165188	1.224332	1.1047316
Pyruvate kinase, muscle	1.1947062	1.2724036	1.1970702	1.2225949	1.2466319	1.1453709	1.1772518	1.0949478	1.3313003	1.0756537	1.2165188	1.2165188	0.9330426	1.0191729
Phase-1 RCT-288	0.60521035	0.80702233	0.88196334	0.5423417	0.6628432	0.6655513	0.8554987	0.8354404	0.7330324	0.8262374	0.8415095	0.8262374	0.8415095	0.545111
Cytochrome P450 2C9 (allelic form 2)	1.591997	1.0650467	1.3993336	1.0677824	0.9630196	1.0639524	0.8502063	0.8570787	0.8989024	1.034347	1.1307098	1.034347	1.034347	1.0471663
Phase-1 RCT-290	0.49004617	0.7434657	0.8618376	0.4395526	0.524011	1.4395526	0.538532	0.8112095	0.69810573	0.677555	0.9157458	0.3810738	0.33068672	0.33068672
Phase-1 RCT-281	1.2001129	1.2733903	1.3020499	1.2698922	0.8402314	1.0943112	1.4395526	1.4395526	1.2545109	1.265228	0.7935568	0.3912112	0.3737788	0.3737788
Phase-1 RCT-282	0.86971225	0.8001329	0.7611614	0.8228736	1.0754166	1.0943112	1.4395526	1.4395526	1.2545109	1.265228	0.7935568	0.3912112	0.3737788	0.3737788
Methylglucosyl-CoA transferase alpha	0.8462023	0.6543156	0.6241026	0.7391725	0.9738002	0.44341367	0.8080675	0.7879705	0.9172263	0.9302228	0.824293	0.8129355	0.7890981	0.8153843
Cytochrome P450 1A2	0.93343984	1.0541384	0.9522894	1.1901003	0.87338624	1.1530432	0.9575562	0.8827773	0.8959984	1.1213522	1.1785747	1.1075474	1.2701732	1.2701732
Phase-1 RCT-287	2.1732338	0.9342703	1.1907717	0.886803	1.1530432	0.9575562	0.8827773	0.8959984	1.1213522	1.1785747	1.1075474	1.2701732	1.2701732	1.2701732
Monomeric oxidase B	0.74546943	0.94531053	0.7542887	0.8398301	1.22257216	1.0527552	0.8827773	0.8959984	1.1213522	1.1785747	1.1075474	1.2701732	1.2701732	1.2701732
Phase-1 RCT-284	0.56452607	0.5124559	0.3924446	0.6330499	0.8512673	0.9753514	1.2254882	1.0130031	0.4576733	0.5645138	0.8557146	0.7839429	0.7839429	0.7839429
Phase-1 RCT-143	0.8058564	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351
Phase-1 RCT-251	0.8007913	1.591373	0.908811	1.3803269	1.0823653	0.5578054	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351	1.0149351
Phase-1 RCT-117	1.3454533	1.448237	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926	0.9630926
Glutathione S-transferase theta-1	1.396235	1.256834	1.3390745	1.0228461	1.1423943	0.9247456	0.9247456	0.9247456	0.9247456	0.9247456	0.9247456	0.9247456	0.9247456	0.9247456
Phase-1 RCT-91	0.97054905	0.82052233	1.0806276	0.8419444	0.7757954	1.1279664	1.0821236	0.960621	0.57434536	1.142063	0.8419444	0.7757954	0.7757954	0.7757954
Phase-1 RCT-142	1.2303578	0.75025587	0.76997476	0.89349874	0.8782022	1.0739388	1.0331719	0.87325484	0.816303	0.75346675	1.8178028	2.0683088	2.2767602	2.2767602
Adrenomedullin type II	1.0881088	1.126493	0.89349874	0.8782022	1.0739388	1.0331719	0.87325484	0.816303	0.75346675	1.8178028	2.0683088	2.2767602	2.2767602	2.2767602
Cyclin methyltransferase	2.0210562	1.347814	2.080116	1.4979753	0.6308556	0.89760164	1.2700394	1.0890286	1.0937502	1.4732467	0.909032	0.9493059	0.909032	0.9493059
Phase-1 RCT-281	1.007756	1.122838	1.3718814	1.2755555	0.9250283	1.3470892	1.2755555	1.0937502	1.4732467	0.909032	0.9493059	0.909032	0.9493059	0.9493059
Ciliary neurotrophic factor	0.90789724	0.77928764	0.91721415	1.0396867	1.0263141	1.0491691	1.0396867	1.0263141	1.0491691	1.0396867	1.0263141	1.0491691	1.0396867	1.0491691
Gap junction membrane channel protein beta 1 (GJB1)	2.359821	1.398073	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842	1.6875842
Phase-1 RCT-98	1.2246518	1.0597479	1.788396	0.893978	1.0834053	1.0497148	1.0106077	1.0343422	1.0488927	0.9498105	1.1021725	1.01723078	0.9470785	1.1806118
Phase-1 RCT-287	0.625103	0.7030092	0.6933159	0.78284746	1.2551234	1.1886116	0.9741023	1.0218469	1.15959	0.9399977	0.87089	0.9058751	0.8755269	0.8755269
Retinol-binding protein (RBP)	0.59587513	0.857206	0.54945566	0.84901655	0.8907804	1.0074395	1.1158943	0.86504773	1.112769	0.8656797	0.88451464	0.89911873	0.82118531	0.82118531
Very long-chain acyl-CoA synthetase	0.54115584	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207	0.6247207
Syndecan-1	0.9418655	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527	0.8420527
Phase-1 RCT-145	1.1712228	1.068527	0.3875857	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527	1.068527
Phase-1 RCT-49	0.853028	1.0289591	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154
Arin	0.853028	1.0289591	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154	0.94188154
Phase-1 RCT-89	1.0207125	0.9930088	1.166248	1.069537	0.9408268	0.7624447	0.8329153	1.2492818	1.1325079	1.0337226	1.0781192	1.0286143	1.1300402	1.1300402
Sarcoplasmic reticulum calcium ATPase	0.71256876	0.6843499	0.7762812	0.8570014	0.9091616	0.8878998	1.068424	0.9059055	0.94965414	0.94965414	0.94965414	0.94965414	0.94965414	0.94965414
Alpha-2-macroglobulin, sequence 2	1.2180467	0.8704483	1.0070261	0.9398781	1.0618204	1.0114563	1.068424	0.9059055	0.94965414	0.94965414	0.94965414	0.94965414	0.94965414	0.94965414
Phase-1 RCT-204	1.0237138	0.9620587	1.6564871	1.7677528	1.1597348	1.1716535	1.360061	1.07594	0.94566786	0.910651705	0.8241885	0.910651705	0.8241885	0.910651705
Vascular endothelial growth factor	0.61180827	0.8087063	0.63405086	0.51020634	0.6779712	0.86831481	0.8888476	0.8770621	0.553668	0.6843119	0.76281413	0.53959064	0.665036	0.4997769
NADP-dependent leucine dehydrogenase, cytosolic	1.0817314	0.78104377	0.93855476	0.8595787	0.8876564	1.0010028	0.8730959	1.2533956	1.0574596	1.0314559	0.81481135	1.1300373	1.110856	0.6836883
DNA binding protein inhibitor D2	0.9530637	1.2671442	0.8937326	0.4225832	0.54833024	0.64131624	0.78708847	0.7421984	0.7077596	1.0359303	0.69416905	0.59857475	0.7298431	0.6712715
Glutathione S-transferase Ya	1.1238644	1.1701748	0.814856	0.5483303	1.1430134	1.118891	0.7477358	1.2013011	1.2755243	1.0670031	1.103778	1.08703	1.4720399	0.95053047
Epoxide hydrolase	0.7911937	0.91334677	0.85788104	0.7824917	0.7874878	0.8653988	0.7182358	0.828845	0.6687334	0.74957037	0.7089221	0.7814183	0.6982882	0.5882362
Insulin-like growth factor I	1.3448416	1.2687445	1.0562594	1.3548951	0.8166343	0.91607048	0.8502217	0.9703936	0.7904172	0.8904982	0.8080176	0.78027414	0.80619395	0.838683
Prostaglandin H synthase	0.80458215	0.73697644	0.9672375	0.920638	0.51804874	0.96750328	0.86146788	0.89307157	0.6852255	0.7859234	0.724381	0.70374453	0.74548724	0.74548724
Phase-1 RCT-136	0.54322333	0.5695282	0.57650006	0.5672375	0.5641218	0.59084874	0.92416614	0.90715355	0.9059059	0.8959637	0.8575073	0.9221053	0.8865788	0.9430762
Phase-1 RCT-137	0.81683745	0.7680086	0.85726915	0.7852165	0.69139847	0.89137214	0.68796873	0.9879284	0.9601276	0.8759699	1.1375344	1.3216238	1.2869108	0.6182537
Hepatic lipase	0.726321	0.7148226	0.83679	0.598817	0.64907753	0.89137214	0.68796873	0.9879284	0.9601276	0.8759699	1.1375344	1.3216238	1.2869108	0.6182537
Phase-1 RCT-164	0.8887835	0.91301054	0.8707835	0.8604047	0.9488021	0.99871787	1.0020124	1.0176947	1.0052828	0.95305235	0.86448463	0.9885949	1.028853	1.0219404
Asyl-CoA dehydrogenase, medium chain	0.6336776	1.0128014	0.7017162	0.8004047	0.9488021	0.99871787	1.0020124	1.0176947	1.0052828	0.95305235	0.86448463	0.9885949	1.028853	1.0219404
Glutathione S-transferase YC2 subunit	0.8422662	1.1140555	0.87705356	0.86162037	0.8472047	0.64172554	1.210352	1.0178536	0.95305235	0.86448463	0.9885949	1.028853	1.0219404	1.0219404
Carbonic dehydratase	0.874337	1.03115	0.7304553	0.8622415	0.1024444	1.2808447	0.9772041	0.8772041	0.8772041	0.8772041	0.8772041	0.8772041	0.8772041	0.8772041
Phase-1 RCT-186	0.7052546	0.8278473	0.70582507	0.542777	1.3718111	0.7320453	0.8622415	1.024444	1.2808447	0.9772041	0.8772041	0.8772041	0.8772041	0.8772041
Apolipoprotein E	1.137129	1.4788877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877	0.7888877
UDP-glucuronosyltransferase	0.87581428	1.0591111	1.3681643	1.1913161	0.80784626	0.7326689	0.6584876	0.5900104	0.84201546	0.77619534	1.0448328	0.7692583	0.65210366	0.84688135
Glutathione S-transferase P1	1.0731521	1.0253077	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936	0.9384936
Disulfide isomerase related protein (ERp72)	0.92760223	1.1951148	0.9651211	1.0572284	1.8282182	1.0572284	1.8282182	1.0572284	1.8282182	1.0572284	1.8282182	1.0572284	1.8282182	1.0572284
Ribosomal protein L13	0.63407195	0.8077248	0.87565594	0.6805235	0.8473065	0.8873674	0.8473065	0.8873674	0.8473065	0.8873674	0.8473065	0.8873674	0.8473065	0.8873674
Cenolipin	0.43668986	0.7313853	0.7582953	0.6222138	1.0964841	1.562781	1.8379296	1.8379296	1.8379296	1.8379296	1.8379296	1.8379296	1.8379296	1.8379296
Inter-alpha-inhibitor H4 heavy chain (Itih4)	0.9555247	1.2088153	1.200234	1.2932212	1.0253684	1.5033115	1.6875655	1.8245592	1.780974	1.8623371				

Phase-1 RCT-3	0.1269445	0.9372127	0.90633926	0.84813213	0.99861023	0.94473737	0.8714945	0.9333978	0.9905091	0.8707758	0.8228818	0.8912764	0.8135329	0.30182336
3-hydroxyisovalerate dehydrogenase	0.87727185	0.8578934	0.86024675	0.1010382	0.7677092	1.0537587	1.054121	1.5332022	1.0742503	1.3241731	1.0468075	1.79021193	0.88024205	1.3238072
Adipic acid dehydrogenase	0.7669643	0.8823674	0.86000186	0.7824544	0.6852242	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247
Carnitine acyltransferase III, sequence 2	0.54763293	0.6726895	0.4316738	0.4316738	0.6852242	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247	0.9305247
Phase-1 RCT-10	0.61126095	0.79577166	0.72099924	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005	0.68575005
Alpha-2-macroglobulin	0.6865469	0.90618294	0.9600945	0.86267436	0.5732763	0.82066375	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273
Dynactin-1 (D100)	0.766018	0.9318367	0.9680045	0.86267436	0.5732763	0.82066375	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273	0.95486273
LYN casease	0.8001396	0.7702064	0.9169955	0.7323569	0.5955314	0.88216723	0.8851681	0.8851681	0.8851681	0.8851681	0.8851681	0.8851681	0.8851681	0.8851681
Phase-1 RCT-252	0.65217525	0.9607236	1.0336118	1.005492	0.8825152	0.78806036	0.7100684	0.7100684	0.7100684	0.7100684	0.7100684	0.7100684	0.7100684	0.7100684
Phase-1 RCT-278	1.0477169	0.9482981	0.8682081	0.8678001	1.0227377	1.2503303	0.9688558	0.9688558	0.9688558	0.9688558	0.9688558	0.9688558	0.9688558	0.9688558
Phase-1 RCT-25	0.90614176	0.9903036	0.96304756	0.9104884	1.0702822	1.0577837	1.0496337	1.0496337	1.0496337	1.0496337	1.0496337	1.0496337	1.0496337	1.0496337
Phase-1 RCT-42	0.96025905	0.89074134	0.96006875	0.97207079	0.82891476	1.1242917	1.1242917	1.1242917	1.1242917	1.1242917	1.1242917	1.1242917	1.1242917	1.1242917
Cytochrome P450 2C11	0.93428326	1.1640686	0.9877905	0.9877905	0.9371442	0.9716955	0.9716955	0.9716955	0.9716955	0.9716955	0.9716955	0.9716955	0.9716955	0.9716955
Phase-1 RCT-202	0.7801524	0.8720005	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885	0.8987885
Complement factor I (CFI)	0.10787787	1.1503438	1.2173884	1.059454	0.9594204	0.8805561	0.8805561	0.8805561	0.8805561	0.8805561	0.8805561	0.8805561	0.8805561	0.8805561
Proteasome activator complex	1.4524212	1.4770133	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717	1.4596717
Activating transcription factor 3	0.95336646	0.9175239	0.88319584	0.9238985	1.0562091	1.0197465	1.0197465	1.0197465	1.0197465	1.0197465	1.0197465	1.0197465	1.0197465	1.0197465
Focal adhesion kinase (p125FAK)	0.95100304	0.8534488	0.7681814	0.8071065	0.76520335	0.9160388	0.9595451	0.9595451	0.9595451	0.9595451	0.9595451	0.9595451	0.9595451	0.9595451
Phase-1 RCT-288	1.130921	0.8411919	1.0300833	0.94072455	1.1278849	1.0432204	1.0110442	0.9240842	0.9240842	0.9240842	0.9240842	0.9240842	0.9240842	0.9240842
Non-responsive element-binding protein	0.64820766	1.6321218	0.82424325	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153
MHC class II antigen RT1.A10 alpha-chain	1.6783357	1.6321218	0.82424325	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153	0.8962153
Aryl sulfotransferase	0.83923234	0.9137655	0.7114398	0.7095057	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915	1.0593915
Phase-1 RCT-43	0.8067598	0.9533633	0.8641604	0.91854005	1.028024	0.923028	0.84345824	0.84345824	0.84345824	0.84345824	0.84345824	0.84345824	0.84345824	0.84345824
Phase-1 RCT-270	0.8152668	0.6639934	0.87411785	0.83517785	0.910878	0.7373962	0.6536524	0.6536524	0.6536524	0.6536524	0.6536524	0.6536524	0.6536524	0.6536524
Colony-stimulating factor-1	0.743342	0.7746006	0.8303106	0.9024715	0.915537	1.0217715	1.0217715	1.0217715	1.0217715	1.0217715	1.0217715	1.0217715	1.0217715	1.0217715
Phase-1 RCT-62	0.8659185	0.7535256	0.9550684	0.77715974	0.9904796	1.0042806	0.9814468	0.9814468	0.9814468	0.9814468	0.9814468	0.9814468	0.9814468	0.9814468
Phase-1 RCT-22	0.7508113	1.0654035	1.0278941	0.95861834	0.99498165	1.1483537	1.1483537	1.1483537	1.1483537	1.1483537	1.1483537	1.1483537	1.1483537	1.1483537
AT-3	1.039477	0.6394162	0.8521118	0.9398697	1.0731682	1.1536291	1.1536291	1.1536291	1.1536291	1.1536291	1.1536291	1.1536291	1.1536291	1.1536291
Phase-1 RCT-18	1.0864013	0.9022895	0.8273384	0.87719843	0.99820304	0.8740393	0.8614071	0.8614071	0.8614071	0.8614071	0.8614071	0.8614071	0.8614071	0.8614071
Phase-1 RCT-123	1.1493667	0.9223173	0.8331618	0.8465045	1.0332271	0.9277964	0.9460795	0.9460795	0.9460795	0.9460795	0.9460795	0.9460795	0.9460795	0.9460795
Phase-1 RCT-168	0.68274614	0.71071297	0.7011626	1.083373	1.1778487	0.9196417	0.82887036	0.82887036	0.82887036	0.82887036	0.82887036	0.82887036	0.82887036	0.82887036
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	0.6951972	0.5217529	0.5913403	0.5535855	0.97985476	0.6561222	0.7898962	0.7898962	0.7898962	0.7898962	0.7898962	0.7898962	0.7898962	0.7898962
Glucose transporter 2	0.755858	0.76708704	1.0223559	0.97016885	0.6724041	0.6591942	0.68899345	0.68899345	0.68899345	0.68899345	0.68899345	0.68899345	0.68899345	0.68899345
Multidrug resistant protein-2	1.0260255	1.107286	1.489036	1.3227829	1.1679947	0.9342662	1.0371237	1.0371237	1.0371237	1.0371237	1.0371237	1.0371237	1.0371237	1.0371237
Multidrug resistant protein-1	1.0497118	1.9784491	1.586537	1.49401	1.3891006	0.9789586	1.0457373	1.0457373	1.0457373	1.0457373	1.0457373	1.0457373	1.0457373	1.0457373
Phosphatidylmethanolamine-binding protein	1.0515064	0.9715907	1.213156	1.230755	0.75814766	0.8455338	0.8066186	0.8066186	0.8066186	0.8066186	0.8066186	0.8066186	0.8066186	0.8066186
Phase-1 RCT-180	1.123357	0.7970683	1.0237629	1.211238	0.9940693	1.496533	1.392808	1.392808	1.392808	1.392808	1.392808	1.392808	1.392808	1.392808
Integrin beta-4	1.2098007	0.892432	1.036629	1.1314088	1.1953608	1.0405123	1.0321196	1.0321196	1.0321196	1.0321196	1.0321196	1.0321196	1.0321196	1.0321196
NADPH oxidase P450 oxidoreductase	3.3595451	1.0892432	1.3977828	3.495938	1.3598785	0.957632	1.080518	1.080518	1.080518	1.080518	1.080518	1.080518	1.080518	1.080518
Waf1	1.3282045	1.1942604	1.3977828	1.1939883	0.96951285	0.9102883	0.8697169	0.8697169	0.8697169	0.8697169	0.8697169	0.8697169	0.8697169	0.8697169
Endogenous retroviral sequences, 5' and 3' LTR	1.3085425	1.0468506	0.8806656	0.5727668	0.9650113	0.9373195	1.1222018	1.1222018	1.1222018	1.1222018	1.1222018	1.1222018	1.1222018	1.1222018
Phase-1 RCT-53	0.93573704	0.7277814	1.0645174	1.0461947	1.0601434	1.1096478	1.1335049	1.1335049	1.1335049	1.1335049	1.1335049	1.1335049	1.1335049	1.1335049
Phase-1 RCT-240	0.95635704	0.7739498	0.8317984	0.9342618	0.83276	1.0534787	1.0180031	1.0180031	1.0180031	1.0180031	1.0180031	1.0180031	1.0180031	1.0180031
Osteopontin	1.2004557	1.2846597	1.4810971	1.3900337	0.9605688	1.1692189	1.2164935	1.2164935	1.2164935	1.2164935	1.2164935	1.2164935	1.2164935	1.2164935
Organic anion transporting polypeptide 1	0.6571592	0.5288465	0.6782046	0.71273637	0.5927729	0.8644067	0.87114645	0.87114645	0.87114645	0.87114645	0.87114645	0.87114645	0.87114645	0.87114645
Phase-1 RCT-241	1.025374	1.5058663	1.059889	1.225173	1.0356827	0.76561683	0.8892807	0.8892807	0.8892807	0.8892807	0.8892807	0.8892807	0.8892807	0.8892807
Tissue factor pathway inhibitor	1.0143725	0.81884503	1.059889	1.1529881	1.3589491	2.2599277	2.0038412	2.0038412	2.0038412	2.0038412	2.0038412	2.0038412	2.0038412	2.0038412
Cyclin-dependent kinase 4 inhibitor P27kip1 (alternate clone)	1.2595673	0.95395944	1.4484469	1.0679413	1.0806409	1.5103675	1.2319768	1.2319768	1.2319768	1.2319768	1.2319768	1.2319768	1.2319768	1.2319768
Phospholipase D	1.7657299	1.7289959	2.1364546	1.800828	1.233767	2.13001	0.8454721	0.8454721	0.8454721	0.8454721	0.8454721	0.8454721	0.8454721	0.8454721
Phase-1 RCT-39	0.87131363	1.6565071	1.091454	1.1293393	1.9001854	1.2102024	1.2853885	1.2853885	1.2853885	1.2853885	1.2853885	1.2853885	1.2853885	1.2853885
Phase-1 RCT-259	1.0041866	0.9488062	1.0688889	1.0101459	0.9500978	1.1322725	1.0734761	1.0734761	1.0734761	1.0734761	1.0734761	1.0734761	1.0734761	1.0734761
Phase-1 RCT-113	1.1644368	1.3232769	1.6508007	1.1440202	1.245062	1.250692	1.2882409	1.2882409	1.2882409	1.2882409	1.2882409	1.2882409	1.2882409	1.2882409
Adenine nucleotide translocator 1	0.5889579	0.57281685	0.70429355	0.6754854	0.86754954	0.70429355	0.94347177	0.94347177	0.94347177	0.94347177	0.94347177	0.94347177	0.94347177	0.94347177
Alpha-1 acid glycoprotein	0.8250056	0.9518963	1.2047158	1.9096551	1.5653538	0.63405937	0.7990107	0.7990107	0.7990107	0.7990107	0.7990107	0.7990107	0.7990107	0.7990107
MHC class II antigen RT1.B-1 beta-chain	2.1263456	1.5121081	1.426763	0.9165113	0.8881725	0.8895427	0.7447278	0.7447278	0.7447278	0.7447278	0.7447278	0.7447278	0.7447278	0.7447278

Organic cation transporter 3	0.7208233	0.82439564	0.79543435	0.9578819	1.1748866	1.6459758	1.4757458	1.4128559	1.5304619	1.7341665	1.3451166	1.3317274	1.2631573	1.3244962
Hypoxia-inducible factor 1 alpha	1.2201945	1.1500506	1.2511733	1.0486638	0.9428139	0.77546173	0.8168813	0.823509	0.8088751	0.73144764	1.0378819	1.1773566	1.1931272	1.0973909
Phase-1 RCT-43	1.0882168	1.2058888	1.3887359	1.2228634	0.97586286	1.1400508	1.2228634	1.0446097	1.0196089	1.041515	0.86000437	0.7830855	0.7830231	0.95957834
Phase-1 RCT-45	0.8314821	0.968242	0.8117841	0.86380204	1.0382061	1.0250335	1.0343918	1.0389721	1.0467553	0.9834937	0.93058943	0.85581048	0.8218943	0.85478508
Malate dehydrogenase, cytosolic	0.7390487	0.73390303	0.88538267	0.92589056	0.89560973	1.1600867	1.1168487	1.2307861	1.2137657	0.8853777	1.1612656	1.042438	1.2251728	1.3271389
VL30 element	1.135816	0.94551504	0.872489	0.53196543	1.3953341	1.592947	1.6238729	1.0334168	1.0092215	1.2074711	0.7172008	0.72959156	0.69188635	0.3948811
Phase-1 RCT-183	0.5732539	0.7636548	0.5251101	0.49207888	0.81872135	0.9022102	0.9003329	0.94767978	0.71640134	0.94943824	0.8416882	0.8392281	0.803486	0.897635
Alpha-fetoprotein	0.887649	0.8556268	1.0167274	0.83752068	1.0067284	1.2438871	1.201876	1.0312313	1.0504045	1.2694449	1.2253153	1.0714608	1.1832265	1.4159833
Calgranulin B	0.42107534	0.50407535	0.3761416	0.5344889	0.8078522	0.7390895	0.84524316	0.93071175	0.56628845	0.898027	0.89523506	0.6906504	0.82887628	1
Tissue plasminogen activator	0.9884152	0.86823666	0.88709415	0.7728518	1.0883877	0.96677744	0.8768021	0.8657725	0.8724279	0.89807865	1.0513722	0.928174	0.9159651	0.82406726
Phase-1 RCT-195	0.97264063	1.0924007	1.5132593	1.0181592	0.7426877	0.96179	0.9685146	0.86744307	0.86470817	0.94895507	0.9131297	1.0595852	1.059408	1.0381951
Liver fatty acid binding protein	0.55984936	0.9242477	0.5608498	0.8045448	1.062532	1.308182	0.867888	1.2702865	0.8529489	1.062157	0.7821718	0.7718065	0.7902153	0.52434087
Alpha-1-microglobulin/albumin precursor (Ambp)	0.63967845	0.8405042	0.80775137	0.646888	0.855077	1.0264595	0.9410932	1.1308525	0.7746034	0.9811368	0.955713	0.854287	0.84748936	
Phase-1 RCT-224	1.3707818	1.0055394	1.2351284	1.0581563	1.0208037	0.8514874	0.8664679	0.94743204	0.9182892	0.800908	1.0558143	1.072734	1.0960242	0.88294885
Phase-1 RCT-158	0.81568814	0.7217145	0.8855246	0.86885348	1.1531224	1.3932132	1.1945359	1.1623381	1.1803001	1.260434	1.0952428	1.1956337	1.1962587	0.94855344
Phase-1 RCT-221	1.28708	1.164855	1.1221832	0.9873455	1.052962	1.0882738	0.9579394	0.9354214	1.0323272	0.93170977	1.1627743	1.0703484	1.1401699	1.2076435
Phase-1 RCT-225	1.0788629	1.1239622	1.28846	1.2511262	1.0997255	1.2096378	1.3027854	1.0526004	1.0801437	1.1534904	1.1095942	1.0538336	1.0784458	1.0041517
Organic anion transporter 3	0.9800405	1.0134358	0.95064414	0.96038953	1.0633953	1.1571686	1.1876011	1.10073	1.1585336	1.134904	1.2738113	1.207624	1.3978831	1.046817
Matrix metalloproteinase-1	1.1280538	1.4711441	1.2041142	1.2840278	0.988952	0.7287803	0.8861187	1.0645063	0.9221038	1.0440083	1.2247422	1.2382657	1.5614807	1.1394211
Urinary protein 2 precursor	1.5582157	2.2537587	1.7790292	1.8657224	0.83760405	0.95339704	0.9889838	1.0762433	0.85958344	1.1006273	1.129776	1.0453893	0.9434817	0.9881403
Phase-1 RCT-212	0.62573105	0.55475134	0.5062885	0.500117	0.76718314	0.88748768	0.8635039	0.9136833	0.7842182	0.8082486	0.8220278	0.47835314	0.5400567	0.44682967
	1.0098642	0.7554106	0.84542197	0.9046709	1.024717	1.0452812	1.0314687	0.9693106	0.9231517	0.98034765	0.95942636	0.96935904	0.8383291	1.0638953

(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes=recr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed

(5) Predictive gene (as in Table 18 and as included in Table 26)

Table 28. Expression Data for 6 Hour Timepoint (1)													
Compound-Dose (2)	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30
Animal Number (3)	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364
Liver Toxicity Information Classification (4)													
Gene Name (5)													
Insulin-like growth factor binding protein 1	0.8751487	1.2947624	0.7400774	0.6369238	0.59288015	0.8607441	0.60763064	0.5685996	1.3891479	1.6660104	1.715455	1.4125255	1.3097118
Gad65	1.3884002	1.4503817	1.3836161	1.2750768	1.2750768	1.2714417	0.8571807	0.7435288	1.7193353	3.8575553	0.8291495	1.0131609	0.9471725
CyPc	1.7051003	1.7071655	1.6671894	1.5648937	1.5648937	1.2678186	1.0942013	1.1384916	1.0416652	1.0426886	1.0310813	0.8656084	0.8259335
NIPK	0.8852137	0.5622983	0.0930564	0.0679347	0.7686394	0.53545945	0.7403367	0.6297803	0.8291281	0.7958907	1.3885408	0.7417723	1.0376207
Calpactin L sequence 2	0.835924	1.0744483	0.2065854	0.0927022	1.598235	1.2672259	1.074238	1.1716988	1.40119845	1.3887974	1.3885401	1.1774081	1.6884555
Heme oxygenase	0.8520505	1.084725	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143	0.9268143
Phase-1 RCT-109	1.4202951	1.4064645	0.5136423	0.6751973	0.57758943	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973
Phase-1 RCT-111	1.149809	1.407714	0.5136423	0.6751973	0.57758943	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973	0.6751973
Argininosuccinate lyase	1.3763374	1.0465178	1.2522221	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567	0.8804567
DNA polymerase beta	1.032096	1.1208141	0.9668884	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015
Phase-1 RCT-103	1.1501688	1.1436805	0.7846063	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015	0.7997015
Ribosomal protein S9	1.2757597	1.3849212	1.526465	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703	1.1971703
Phase-1 RCT-114	1.5968797	1.6355588	1.1180932	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232
Phase-1 RCT-15	1.3337117	1.019709	1.7784156	1.8025532	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232	1.733232
Macrophage inflammatory protein 2 alpha	1.3485932	1.3362571	1.0865799	1.2007248	1.3977265	0.8616945	0.8197633	1.0376583	1.6221519	4.3107723	1.1607493	0.7666553	1.008388
NGF-inducible anti-proliferative relative secreted protein (PC3)	0.9175451	0.8719331	0.8334384	0.80384214	0.6326296	0.63848784	0.8026792	0.93659197	0.7053912	0.6960234	2.0236828	0.97907405	1.058517
Phase-1 RCT-181	1.4564122	1.2894124	1.137793	1.6278744	1.2532948	0.76031184	0.9058005	1.0162352	0.797795	0.33611062	0.3694592	0.5441433	0.795416
Cyclin D3	1.1924801	1.4951497	1.933316	1.5168186	1.5415518	2.4067472	2.0710123	2.8462287	0.90285915	0.97119768	0.8177567	1.2640256	0.9269871
Phase-1 RCT-108	1.0483928	1.0584991	0.94762245	0.90940225	0.8749323	0.9490463	1.0365097	0.9531414	1.2807678	1.2053859	0.7042909	0.9988697	1.16836
Phase-1 RCT-66	0.902886	0.45170256	0.7130653	0.76330104	0.84068194	1.192137	1.192137	1.192137	1.192137	1.192137	1.192137	1.192137	1.192137
Phase-1 RCT-75	1.0573394	1.0131379	1.019913	0.98459355	0.9761468	1.0282824	1.0219682	1.0219682	1.0219682	1.0219682	1.0219682	1.0219682	1.0219682
Acad-CoA carboxylase	1.0878452	1.1677774	1.041591	0.9597394	0.8302681	0.868904	0.96047958	0.9531943	0.919639	0.819639	0.819639	0.819639	0.819639
Phase-1 RCT-85	1.1021587	1.1084512	0.8054625	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681	0.8302681
Cyclin C	0.94155806	0.9801474	0.82137436	0.90759575	0.9372247	1.255554	0.9716704	0.9716704	0.9716704	0.9716704	0.9716704	0.9716704	0.9716704
Phase-1 RCT-49	1.0840091	0.9228432	0.8975433	0.85705155	0.7697048	0.7697048	0.7697048	0.7697048	0.7697048	0.7697048	0.7697048	0.7697048	0.7697048
Phase-1 RCT-9	1.2032421	1.1805227	0.8476652	1.0212878	1.1639798	1.4744777	0.9952324	0.92143065	1.3279678	1.2006667	1.616124	0.9257932	0.884334
Gad65	1.7446985	1.9650012	1.027362	1.1639798	1.4744777	0.9952324	0.92143065	1.3279678	1.2006667	1.616124	0.9257932	0.884334	0.884334
Phase-1 RCT-166	1.0741981	1.071751	0.8205444	0.8730707	0.904857	1.0319602	1.0076504	0.97639544	1.3324766	1.2142596	0.9257932	0.884334	0.884334
Collin	0.91550475	0.890203	1.0961393	0.93063455	0.92567456	0.7488945	1.6273024	1.3919214	1.187692	1.2097648	1.4237448	1.0041933	1.234779
Phase-1 RCT-127	0.8836567	0.8191499	1.061252	1.3617604	1.7081254	1.3576747	1.1855714	1.1152385	1.0913938	0.852928	1.2374218	1.4223213	1.5873238
Macrophage inflammatory protein-1 alpha	1.1670322	1.2244252	1.3617604	1.0959337	0.84063955	1.405155	1.0945891	1.0399856	1.1849888	0.89056945	0.8452299	1.0194948	0.9362267
Zinc finger protein	0.910933	0.7835153	1.017046	1.0959337	0.84063955	1.405155	1.0945891	1.0399856	1.1849888	0.89056945	0.8452299	1.0194948	0.9362267
Phase-1 RCT-73	0.8550305	0.838465	1.010803	1.1397591	1.2475387	1.691877	1.1433085	1.094321	1.1978416	1.007456	0.8988063	1.5645282	1.6837605
Gluutamine synthetase	1.0126511	1.4310333	0.91386153	0.9922308	1.0646103	1.0646103	1.0646103	1.0646103	1.0646103	1.0646103	1.0646103	1.0646103	1.0646103
Cb-binding protein	0.5647027	0.6716238	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382	1.2150382
Phase-1 RCT-242	1.4221622	1.2410867	0.9856205	1.1220657	1.406945	1.194212	1.0453906	1.0880314	1.287056	0.8943217	1.0646733	1.0646733	1.0646733
Phase-1 RCT-60	1.3076531	1.1411738	1.3494944	1.3055202	1.1657332	1.2933307	1.1756068	1.1698517	1.698319	1.1551172	1.0120801	1.2281874	0.9384159
Elongation factor-1 alpha	1.069449	1.1232607	1.1356872	1.1166382	1.2151353	1.3581154	0.9817641	1.0225891	1.0225891	1.0225891	1.0225891	1.0225891	1.0225891
Integrin beta1	1.2503636	1.512165	1.0167036	0.8384475	0.8065849	1.3058779	1.6903369	1.3385421	0.9590027	0.799069	0.7932318	0.7491818	0.6583055
Insulin-like growth factor binding protein 5	1.5161402	1.3478214	1.7688239	2.32741	2.3021407	1.0173962	0.7633287	0.6313107	0.7821839	1.3349786	1.4169556	0.76949103	1.1954058
Phase-1 RCT-59	1.2076896	1.2177812	0.96898407	1.0140747	1.0173962	0.7633287	0.6313107	0.7821839	1.3349786	1.4169556	0.76949103	1.1954058	1.1954058
Phase-1 RCT-78	1.2483572	2.4123405	0.7140174	0.7465456	0.81730556	0.7633287	0.6313107	0.7821839	1.3349786	1.4169556	0.76949103	1.1954058	1.1954058
Feritin Hcrtin	0.9933592	1.0881922	0.7006294	0.7452266	0.76406014	1.0190778	0.70266396	0.7172857	1.171653	1.0739478	0.79095435	0.5798268	0.78784745
Phase-1 RCT-11	0.6414037	0.6255596	1.09492	0.139405	1.3519524	0.965252	1.2881054	1.0887587	1.3547277	1.1344333	2.141483	1.203056	1.227542
PTEN/MAC1	1.1149311	1.0278114	0.744524	0.6924004	0.6852398	0.6852398	0.6852398	0.6852398	0.6852398	0.6852398	0.6852398	0.6852398	0.6852398
Phase-1 RCT-214	0.6044087	0.7877235	1.621052	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945	0.9378945
Phase-1 RCT-112	1.0771238	0.8911145	0.7553053	0.6263197	0.8136375	0.8136375	0.8136375	0.8136375	0.8136375	0.8136375	0.8136375	0.8136375	0.8136375
Thymidine synthase	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247	0.6170247
Phase-1 RCT-13	0.79787534	1.1668704	0.4629494	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873	0.72340873
Nucleosome assembly protein	0.74633014	1.107617	1.1195681	0.8294954	1.1655861	0.90957	0.73693975	0.73693975	0.73693975	0.73693975	0.73693975	0.73693975	0.73693975
Cholesterol 7-alpha-hydroxylase (P450 VII)	0.88812766	0.8076834	1.2069361	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531	0.9589531
Vesicular monoamine transporter (VMAT)	0.7712702	0.66010356	1.3494319	1.1498145	1.1858497	2.3930652	1.0446712	1.0430333	1.0253373	0.97481304	0.8465416	2.3930652	1.645687
Phase-1 RCT-260	1.1398913	1.181598	0.88131114	0.9234241	0.9017672	0.86945647	0.7785559	0.7973398	0.7251355	1.1982921	0.6520241	1.2354124	0.8735508

Table 28

Phase-1 RCT-32	0.9701713	1.5706564	0.89251586	0.7103382	0.6750878	0.89305663	1.5161053	0.7473574	1.904954	0.940959	1.22038	0.509711	1.0514894	1.0330784
Perovskite assembly factor 1	1.206423	1.1778784	1.2566507	1.2066907	1.2894771	1.7699778	1.0542685	1.095064	0.9602147	1.2687724	0.8726336	1.0665007	1.0665007	0.9220677
B-carboxianine DNA glycosylase	0.8989094	1.1627195	1.1379384	1.1369862	1.0008862	1.7059772	0.8761938	0.8591438	1.1702703	0.9211398	0.7211846	1.133988	1.304375	0.8925817
Phase-1 RCT-42	1.045203	0.9665997	0.7907658	0.8290001	0.8425873	0.8702699	0.92964274	0.85396424	0.8944444	1.123238	0.8683105	1.0047274	0.9402325	0.9402325
Matrix F6	0.752205	0.85271394	0.9508085	0.9630423	0.91058196	0.7986767	0.9786767	0.874755	0.739458	0.7324065	1.292672	0.7728313	0.7636286	0.7636286
Phase-1 RCT-184	0.91212668	0.9452984	0.86582	1.0562302	1.0564773	1.4435261	1.149296	1.060707	0.9794884	0.9672141	0.8714188	0.9953904	0.9407821	0.8265665
Phase-1 RCT-168	0.7539833	0.7602394	0.831526	0.9078476	0.8521743	0.90003264	0.8207376	0.8207376	0.8207376	0.8207376	0.8207376	0.8207376	0.8207376	0.8207376
Phase-1 RCT-119	0.7086841	0.6586675	0.68170565	0.64850944	0.7394286	0.615427	0.8050738	0.8191593	0.60572376	0.87118836	0.87118836	0.87118836	0.87118836	0.87118836
Carbonic anhydrase II	0.7086841	0.6586675	0.68170565	0.64850944	0.7394286	0.615427	0.8050738	0.8191593	0.60572376	0.87118836	0.87118836	0.87118836	0.87118836	0.87118836
Tryptophan hydroxylase	0.7086841	0.6586675	0.68170565	0.64850944	0.7394286	0.615427	0.8050738	0.8191593	0.60572376	0.87118836	0.87118836	0.87118836	0.87118836	0.87118836
Phase-1 RCT-171	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Phase-1 RCT-179	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Phase-1 RCT-161	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Phase-1 RCT-207	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Phase-1 RCT-144	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Phase-1 RCT-225	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Cytochrome P450 2E1	1.3540204	1.5222381	1.2861114	1.1873951	1.2278482	2.5557704	0.9391683	1.0091383	0.9006427	1.2753224	1.003181	1.021769	0.8933363	1.0095943
Thymidine-1 (T1)	0.8518778	0.6009029	0.7488289	0.6708374	0.6740977	0.87795033	0.87724626	0.8178468	0.8178468	0.8178468	0.8178468	0.8178468	0.8178468	0.8178468
Carbonic anhydrase II	0.5366234	0.33320174	0.5133709	1.4482896	1.4290621	4.6755233	0.3117113	0.4750884	0.6790965	0.4831	0.4522781	0.38812738	0.38812738	0.38812738
Phase-1 RCT-140	1.945231	1.4673231	1.4689481	1.1391897	1.2018342	2.8859028	1.2546433	1.1288985	1.0261666	1.036251	0.7926259	0.82169005	0.812573	0.7964853
Complement component C3	0.7090959	0.8553855	0.75235176	0.5486867	0.6566594	0.6202878	0.7283553	0.5500085	1.1381158	0.9357483	1.6502264	0.8762431	1.3000246	1.3000246
Glucuronidase	0.96712823	0.8520968	1.1187791	1.3933642	1.1708927	1.098628	0.766411	0.66356205	0.8059638	0.70002127	0.7230084	0.63276194	0.7762263	0.7762263
3-methyladenine DNA glycosylase	1.2513576	1.0719923	0.8860234	0.8188426	1.0203418	1.168032	0.9330384	0.939453	0.9412754	1.0343086	0.68721086	0.9037236	0.80374354	0.80374354
Protonal multifunctional enzyme type II	1.2513576	1.0719923	0.8860234	0.8188426	1.0203418	1.168032	0.9330384	0.939453	0.9412754	1.0343086	0.68721086	0.9037236	0.80374354	0.80374354
Phase-1 RCT-40	0.7221244	0.8075842	0.9843345	0.9949611	1.352535	1.234462	1.387426	1.768845	1.3963398	1.3932844	1.2037604	1.0407898	0.8686678	0.8686678
Senescence marker protein-30	0.40139946	0.3287874	0.89288454	0.89462143	0.73067	0.9234164	0.9900365	0.7460016	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663	1.1797663
Cytin G	1.9774908	2.1333214	1.6856755	1.2970331	1.1660768	1.371353	0.87576243	0.9611826	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663	1.1797663
Melanoma-associated antigen M5A19	0.39017606	0.5500516	0.5304065	0.98821105	0.8241021	0.58484368	0.7168816	0.6659261	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663	1.1797663
Alcohol dehydrogenase 1	1.2445715	1.4046497	0.8057645	0.8976883	0.8413319	0.7837038	0.5547287	0.713538	0.7460016	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663
Stem cell factor	0.6972194	0.8057645	0.8976883	0.8413319	0.7837038	0.5547287	0.713538	0.7460016	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663	1.1797663
Protein kinase phosphatase alpha	2.097427	2.292475	0.8253163	0.8976883	0.8413319	0.7837038	0.5547287	0.713538	0.7460016	0.6592631	0.6575459	0.43094437	1.8031058	1.1797663
Phase-1 RCT-55	1.3821775	1.5071722	0.85152185	0.9730741	0.9011802	1.1470127	0.923241477	0.7775741	1.1789468	1.0519481	1.2543423	1.3448383	1.3884952	1.3884952
Uniquin conjugating enzyme (RAD 6 homologous)	0.37765675	0.9114892	0.918578	0.8860234	0.8920266	0.7265733	0.7973736	0.52033683	0.8680876	0.6463044	1.1988574	1.078113	1.1865564	1.1865564
DNA topoisomerase I	0.81776855	0.808462	0.9706428	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266	0.8870266
Superoxide dismutase Mn	1.1414694	1.0654032	1.2079335	1.2678173	1.2752844	1.4448695	0.97417917	0.9883891	1.330703	0.8938979	0.7440834	1.5940575	1.0357183	1.2246869
Beta-tubulin, class I	1.2449441	1.2044685	0.8686334	0.6757724	0.7731088	0.67479074	0.8577837	0.85540843	0.60717434	0.6178029	0.3178418	0.588104	0.6175286	0.5886885
Carbamyl phosphate synthetase I	1.0809479	0.8739687	0.8686334	0.6757724	0.7731088	0.67479074	0.8577837	0.85540843	0.60717434	0.6178029	0.3178418	0.588104	0.6175286	0.5886885
Dialkylglycerol kinase zeta	0.81335046	1.0522574	1.2645379	0.92984784	1.2513217	1.1502829	1.1027484	1.027484	1.027484	1.027484	1.027484	1.027484	1.027484	1.027484
Phase-1 RCT-141	1.3499728	1.3743372	1.2008785	1.1885026	1.139514	2.060828	1.1027484	1.027484	1.027484	1.027484	1.027484	1.027484	1.027484	1.027484
14-3-3 zeta	2.4695523	2.1727684	0.707828	1.9712237	1.2489913	0.8801402	0.897548	0.6656234	1.6114365	1.6697762	1.2263759	0.9472051	0.760698	0.760698
Gamma-actin, cytoplasmic	1.5147691	1.628659	1.075982	0.95029324	0.7166286	0.561684	0.56618994	0.6566534	1.6114365	1.6697762	1.2263759	0.9472051	0.760698	0.760698
Ribosomal protein L13A	1.2670857	1.5530739	0.9102911	0.7841627	0.872826	0.8555979	0.821318	0.8327267	1.2200649	0.9002272	0.81141655	1.0224178	1.1659775	1.1659775
Phase-1 RCT-65	1.4315622	1.0502143	1.2196866	1.3331428	1.1058934	1.1793378	1.1407274	1.0752353	0.9831354	0.8410533	0.9375822	0.79101304	0.44462457	0.5189442
Sh-1	1.590989	1.4588537	1.943449	1.3317611	1.2383246	1.484487	2.0524855	1.3800414	1.4381838	0.9868008	1.043312	0.87878186	0.35313445	0.2786272
Protein O-mannosyltransferase 1 (Pom1)	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466	1.2620466
HMG CoA reductase	0.9406853	1.0045577	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407	1.335407
Phase-1 RCT-12	1.2427469	1.2522887	1.0786821	1.564029	1.3399119	1.2818308	1.183637	1.1867266	1.0419338	1.0490873	0.6772058	0.6933239	0.8117735	0.8117735
Interferon related developmental regulator IFRD1 (PC4)	0.8943749	0.900337	0.7656484	0.9827396	0.8120425	0.7081444	1.2013717	0.7571593	0.70687776	0.70687776	1.253503	1.6987974	1.3359295	1.7920336
Glucose-regulated protein 78	1.100047	1.4017015	0.7080406	0.8545324	0.75757356	0.8545324	0.75757356	0.8545324	0.75757356	0.8545324	0.75757356	0.8545324	0.75757356	0.8545324
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.83513176	0.90653464	1.0077075	0.6072537	1.0339527	2.0050724	1.3610573	1.362374	1.362374	1.362374	1.362374	1.362374	1.362374	1.362374
Capsase 6	1.1449169	1.2952598	1.237769	1.1723615	0.975983	1.4007583	1.007528	1.007528	1.007528	1.007528	1.007528	1.007528	1.007528	1.007528
Phase-1 RCT-169	1.1122804	1.1024202	0.832689	0.8021695	0.8671795	0.8633513	0.8051678	1.0704155	1.2216249	0.8260248	1.3278272	1.0032408	0.897775	0.897775
Phase-1 RCT-197	0.85790735	0.9470594	0.7126237	0.87447333	0.88407695	0.8186933	1.057327	0.87447333	0.88407695	0.8186933	1.057327	0.87447333	0.88407695	0.8186933
Phase-1 RCT-34	0.9541856	0.886345	0.8029276	1.272087	1.0773942	1.272087	1.272087	1.272087	1.272087	1.272087	1.272087	1.272087	1.272087	1.272087

Table 28

Phase-1 RCT-72	1.1632466	1.1491065	1.0784408	1.0295455	1.0164021	0.9139234	0.9122369	0.8902516	1.0525385	1.1507241	0.99558134	0.8326193
Pyruvate kinase, muscle	1.1153003	1.1036966	1.1433958	1.1880682	1.3815341	0.9172634	1.2632686	0.82041675	0.7319853	0.5884887	0.8123157	0.8220736
Phase-1 RCT-268	0.8985404	0.8959275	0.8477587	0.72598494	0.9107493	0.9203987	0.8989161	0.8208545	0.6505011	0.8427211	0.9168942	0.8188682
Cytochrome P450 2C39 (alternate clone 2)	1.1604788	1.0784889	1.6372856	0.99599125	0.9992106	0.82077307	0.86733774	0.89408534	0.8648045	0.95910735	1.298519	0.7894607
Phase-1 RCT-260	0.3925543	0.5188859	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125	0.90059125
Phase-1 RCT-261	3.2454116	3.6023922	2.0605282	2.1988669	0.92939335	0.8707635	0.8352747	0.8352747	0.8352747	0.8352747	0.8352747	0.8352747
Methyl-CoA carboxylase alpha	0.8975087	0.9681992	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214	0.8544214
Cytochrome P450 1A2	0.9776212	1.064181	1.005421	1.005421	1.005421	1.005421	1.005421	1.005421	1.005421	1.005421	1.005421	1.005421
Phase-1 RCT-297	1.150562	1.101697	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881	1.1530881
Monomeric oxidase B	1.0927002	1.200428	0.65046	0.8257553	0.9785165	0.9785165	0.9785165	0.9785165	0.9785165	0.9785165	0.9785165	0.9785165
Phase-1 RCT-264	0.7247194	0.8079825	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844	0.9274844
Proteinase activator/adapted receptor gamma	0.659683	0.586184	0.9733292	1.540002	1.017682	1.017682	1.017682	1.017682	1.017682	1.017682	1.017682	1.017682
Phase-1 RCT-143	0.8570184	0.9049491	0.845163	1.0071682	0.9188455	0.9188455	0.9188455	0.9188455	0.9188455	0.9188455	0.9188455	0.9188455
Phase-1 RCT-251	1.3092402	1.8119745	1.318888	0.9855898	1.4188455	1.4188455	1.4188455	1.4188455	1.4188455	1.4188455	1.4188455	1.4188455
Phase-1 RCT-117	0.8119733	0.7829123	1.202403	0.469825	1.187287	1.2029724	0.7089304	0.90013776	0.915101	0.915101	0.915101	0.915101
Glutathione S-transferase theta-1	0.9334046	1.006958	0.9468591	1.006958	1.006958	1.006958	1.006958	1.006958	1.006958	1.006958	1.006958	1.006958
Phase-1 RCT-91	0.9476089	1.0283089	0.8247688	0.94597005	1.0052014	1.2411586	1.0471586	1.0471586	1.0471586	1.0471586	1.0471586	1.0471586
Phase-1 RCT-142	0.8442029	0.73309516	0.862093	0.90914265	0.9158485	0.8188872	0.5057413	0.62706848	0.67823754	1.0546398	1.2545007	0.935008
Actin receptor type II	1.208805	1.4168495	1.0355688	0.9158485	1.13883	1.0705909	0.9373513	1.0076952	0.5736185	0.6584544	0.5471241	0.7316885
Glycine methyltransferase	2.2955576	1.6179285	0.9055575	1.13883	1.0705909	0.9373513	1.0076952	0.5736185	0.6584544	0.5471241	0.7316885	0.7273154
Phase-1 RCT-281	0.76270473	0.6862142	0.88917005	0.8222711	0.91478117	1.2821543	1.0681897	1.6185822	1.3104142	1.2512434	1.1877234	1.2977872
Ciliary neurotrophic factor	0.8640685	0.8799803	0.9378845	0.8222418	0.8534116	0.7274112	0.8540845	0.9374631	0.9511628	0.7699405	1.2524508	1.4153033
Gap junction membrane channel protein beta 1 (Gp11)	1.0277741	0.9590847	0.9974397	0.9969235	0.92440057	0.8355816	0.85646704	0.79780525	0.861724	1.0013921	1.6396057	0.4500476
Phase-1 RCT-98	0.8988818	1.0883654	0.96215796	0.9201691	0.8716278	0.6595804	0.63923154	0.8093003	1.0598435	0.9609506	0.92721075	1.0082812
Phase-1 RCT-287	0.8159883	0.8988797	0.95368945	1.2208545	1.1424453	1.2366883	1.1695523	1.1215166	0.78973284	0.7088116	1.6868874	0.86101767
Retinol-binding protein (RBP)	0.7304211	0.740447	0.76519845	0.909123	1.1844683	1.388881	1.151059	1.167086	1.2055087	0.8888888	1.4848015	1.2295724
Very long-chain acyl-CoA synthetase	0.8174245	0.7938023	0.803674	0.9124303	0.9001855	0.95671946	1.0079744	1.1710634	1.3555148	1.1814111	1.1426262	1.6831209
Syndecan-1	0.9153151	1.0275628	0.7745035	0.5571486	0.8210932	0.8174254	0.8561558	0.9851443	0.8521097	1.201632	0.685534	1.1259888
Stathmin	0.98769735	1.2790582	2.4217	0.4851351	0.7923595	1.065366	1.2940271	0.8901208	0.8972694	0.8133075	0.610063	0.85022825
Phase-1 RCT-145	1.2439121	1.271246	1.010527	1.1327103	1.0713522	1.520333	1.3655419	1.3136513	1.5038818	1.6459347	1.126231	1.4980225
Actin	0.968872	0.8649783	0.96517323	0.73095327	0.6615657	0.642479307	0.85656555	0.8203832	0.7243302	0.9358024	1.1592448	0.8037477
Phase-1 RCT-48	1.1613208	1.1388768	0.7185942	0.8378858	0.7435004	0.9585874	0.77631007	0.8315605	0.92325145	0.7922193	0.6505604	0.5819526
Sarcoplasmic reticulum calcium ATPase	1.4508644	0.94587255	0.7218253	0.6953375	0.61065704	0.3908156	0.607136	0.76316306	0.7087691	0.6765934	1.3989866	1.8982299
Alpha-2-macroglobulin, sequence 2	0.9714241	0.7777894	1.0983198	1.1164016	1.0477768	0.87439464	0.78883433	0.8348436	1.0076044	1.0494568	1.3068031	0.8960037
Phase-1 RCT-204	0.8531602	0.7706134	0.9792123	0.62273656	0.70904976	1.4321207	1.1131294	1.0329584	1.079375	1.1588309	1.0422078	0.71587865
Vascular endothelial growth factor	0.7893217	0.61725456	0.9471531	0.9471216	0.90018106	1.0730528	1.1332413	0.8449855	0.8249846	1.5794828	0.70163316	1.1244615
NADP-dependent isocitrate dehydrogenase, cytosolic	0.7292506	0.7497474	1.1868939	1.2405177	1.1018492	1.1453905	0.94905885	0.88005897	1.2498148	1.3115887	1.6956133	1.4671962
DNA binding protein inhibitor ID2	0.6463135	0.58641707	0.7148886	0.9278091	0.5879122	0.35841134	0.71052915	0.4832825	0.6078552	0.8798902	1.6984073	0.63219064
Glutathione S-transferase Ya	1.0675893	0.9832011	0.8530811	1.031203	0.87534326	0.91588725	0.79630176	1.3675271	1.5553053	0.767323	0.9470847	1.5320638
Epoxide hydrolase	0.7654597	0.5893987	0.7209237	0.60284175	0.6874528	0.52006724	0.7310195	0.6812882	0.85514557	0.645755	0.2891303	0.9418932
Insulin-like growth factor I	1.0355821	0.58942913	1.5270888	2.8047916	1.5407084	2.808698	3.4887638	1.1811235	1.8082358	0.91348916	0.36888357	0.9794984
Prostaglandin H synthase	0.87280755	0.79512593	0.9685028	1.071242	1.822246	0.978864	2.8222593	1.2294345	0.81700447	0.846556	0.9126331	0.6790728
Phase-1 RCT-136	0.63254155	0.7325053	0.7278973	0.132684	0.853358	0.802201	0.9395233	0.8471353	0.8861078	2.892382	1.003059	0.8114474
Phase-1 RCT-137	0.91134083	0.8786837	0.7086034	0.9533085	0.82458056	0.9403478	0.9785263	0.8643539	0.8523828	0.8625547	0.8684697	1.4463875
Hepatic lipase	0.761699	0.6433324	1.03716	0.708702	1.031888	1.2301338	1.2604471	1.2035058	1.1354585	0.8584697	0.87160424	0.89751636
Phase-1 RCT-164	0.867454	0.70743483	1.3468238	1.8842306	1.5632342	2.448719	1.3983933	1.181242	0.96118705	0.87289244	0.80030533	0.87289244
Acyl-CoA dehydrogenase, medium chain	0.807353	0.8298361	1.36549	1.4008471	1.2289723	1.448719	1.2289723	1.111156	1.0621109	0.82862554	0.80030533	0.87289244
Glutathione S-transferase Yb2 subunit	1.230837	0.7014769	1.36549	1.4008471	1.2289723	1.448719	1.2289723	1.111156	1.0621109	0.82862554	0.80030533	0.87289244
Cardiolipin reductase	0.885908	0.8685878	1.2538053	1.3633324	1.5357416	2.7721386	1.635267	0.6818214	0.9206383	0.9981119	1.6030767	0.47394648
Phase-1 RCT-166	0.6928818	0.7370885	0.83212185	0.56624097	0.84579375	1.1388313	1.1388313	1.1388313	1.1388313	1.1388313	1.1388313	1.1388313
Adipocytin E	0.8018561	0.9622668	0.8503968	0.777857	0.83212185	0.56624097	0.84579375	1.1388313	1.1388313	1.1388313	1.1388313	1.1388313
UDP-glucuronosyltransferase	0.780731	0.7639668	0.8503968	0.777857	0.83212185	0.56624097	0.84579375	1.1388313	1.1388313	1.1388313	1.1388313	1.1388313
Glutathione S-transferase P1	0.8146224	1.201184	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814	1.1938814
Disulfide isomerase related protein (Ero72)	0.7612511	0.8306719	0.8024151	0.9216814	0.9433824	1.3341535	0.993705	1.0942705	0.8769346	0.8271024	0.8209814	0.7276438
Ribosomal protein L13	0.6463536	0.96051897	1.1297263	0.8510876	0.8689222	0.6318648	0.62657	0.7262002	0.999139	2.187539	1.0526619	1.0598775
Ceruloplasmin	0.86162955	0.9578501	1.4108797	1.0433478	1.2265004	1.1194184	1.3013588	1.3116717	1.0382118	0.87894085	0.8316061	1.09575
Inter-alpha-inhibitor H4 heavy chain (Ith4)												

Table 28

Phase-1 RCT-13	0.0365647	0.9395714	1.1683317	1.2281176	1.1786759	1.5889865	1.3203044	1.1794345	1.0768614	0.9503788	0.8403319	0.9282445	0.9862084	0.7017373
Felin beta (relu)	1.008103	0.9023766	1.141366	1.418065	1.6391253	1.2317579	1.0815339	1.3790599	1.137823	0.7990028	0.8403319	0.9282445	0.9862084	0.7017373
3-hydroxybutyrate dehydrogenase	0.8004312	0.8617506	0.866013	0.9297474	1.049428	0.8663464	0.8673001	0.871683	0.8672214	0.7951914	0.8403319	0.9282445	0.9862084	0.7017373
Carbonic anhydrase III, sequence 2	0.9892197	0.7186116	0.7383021	1.4224036	1.2980283	0.9005180	1.1275950	1.746742	0.8016424	0.5924348	0.9242223	1.4403353	2.057483	0.4087109
Phase-1 RCT-10	0.7607133	0.7415813	0.9021094	0.72274136	0.72274136	0.6317115	0.5566494	0.6978436	0.8461718	0.8701629	0.7324271	1.4403353	2.057483	0.4087109
Alpha-2-microglobulin	0.8543968	0.8091555	0.8187496	1.116872	0.6242959	0.6317115	0.5566494	0.6978436	0.8461718	0.8701629	0.7324271	1.4403353	2.057483	0.4087109
Dynamin-1 (D100)	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455
Lysyl oxidase	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455
Phase-1 RCT-252	0.9007296	0.8645183	0.8022477	0.7208034	0.6455153	0.661684	0.6455153	0.661684	0.6455153	0.661684	0.6455153	0.661684	0.6455153	0.661684
Phase-1 RCT-278	0.8091201	0.8259457	1.420432	1.2163442	1.1728682	1.2097256	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455
Phase-1 RCT-279	0.8091201	0.8259457	1.420432	1.2163442	1.1728682	1.2097256	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455	0.9529455
Phase-1 RCT-25	1.1500149	1.0104178	1.0951077	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097	1.052097
Cytochrome P450 2C11	1.0471988	1.3320513	0.8281661	0.9431395	0.889177	0.7078110	0.6394816	0.5366202	0.4742153	0.3974721	0.3121082	0.2311082	0.1521082	0.0731082
Phase-1 RCT-1	0.8154915	0.8705482	1.3969834	1.530778	1.6748725	2.414758	1.5500416	1.3565664	0.9817895	0.8143403	0.639111	0.456902	0.2741161	0.0931161
Complement factor (CFI)	0.7944027	0.9405463	1.456007	2.003728	2.387867	3.354039	2.243398	1.354039	0.751753	0.3541772	0.7950455	0.8602094	1.1540178	0.081989
Proliferating cell nuclear antigen gene	1.250155	1.3149804	1.188911	0.9436524	0.8869635	0.7382627	0.8757437	0.8757437	0.8757437	0.8757437	0.8757437	0.8757437	0.8757437	0.8757437
Activating transcription factor 3	1.074857	0.9421904	0.8009673	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088
Focal adhesion kinase (p125-AK)	0.8159593	0.9470403	0.8009673	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088	0.768088
Phase-1 RCT-289	0.8025556	0.8754532	0.782928	0.9721758	1.198728	1.0644622	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294
Phase-1 RCT-259	1.45912	1.0575374	1.198728	1.0644622	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294	0.9650294
Intracellular element-binding protein	1.1640453	1.8355906	1.0352157	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178
MHC class II antigen RT1.A1(a) alpha chain	1.2438897	1.0183107	1.3811642	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178	1.3159977	1.0759178
ATP sulfurylase	0.9160247	0.920583	0.8690023	0.94338	0.8877994	0.7586301	1.2303732	0.7586301	1.2303732	0.7586301	1.2303732	0.7586301	1.2303732	0.7586301
Phase-1 RCT-171	0.8125678	0.6399464	0.8961004	0.833401	0.6942604	0.6411952	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533
Phase-1 RCT-143	0.8125678	0.6399464	0.8961004	0.833401	0.6942604	0.6411952	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533	0.6801533
Phase-1 RCT-270	0.9541161	1.0359334	1.0597334	1.00955	1.0419124	1.00955	1.0419124	1.00955	1.0419124	1.00955	1.0419124	1.00955	1.0419124	1.00955
Calcium-stimulating factor-1	1.2089031	1.1897026	0.8132334	0.8306592	1.1300417	0.8293325	0.9072274	0.8293325	0.9072274	0.8293325	0.9072274	0.8293325	0.9072274	0.8293325
Phase-1 RCT-42	0.8066245	0.7705736	0.8002446	0.7619173	0.7620192	1.1037188	0.908813	1.442651	1.226303	1.123772	0.914178	0.0555274	0.9424185	1.1603318
Phase-1 RCT-22	1.1453643	1.1618675	1.0225776	1.0626341	1.0402664	1.3011038	1.2949415	1.3059562	0.8510691	0.6521061	0.9494674	0.9706572	1.102771	1.0055674
AT-3	0.9063733	0.9031281	0.9076814	1.068957	0.9859456	1.481328	0.764752	0.1069092	0.1071584	0.1034021	0.156103	0.3325709	0.4241174	0.1251168
Phase-1 RCT-18	0.92925	0.8908194	0.8773513	0.90315026	0.9332957	0.9653415	0.9595986	0.9141742	0.890918	0.890918	0.890918	0.890918	0.890918	0.890918
Phase-1 RCT-123	0.9787558	0.9073245	1.1024788	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393	1.0431393
Phase-1 RCT-66	0.8944515	1.2252038	0.804538	0.8550634	0.724544	0.6783013	0.7355408	0.84205216	0.9458036	1.0392802	1.0237658	1.1357505	1.0835376	0.8502548
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.8052924	0.8228847	0.7899385	0.8589392	0.7089555	0.7387073	0.7387073	0.7387073	0.7387073	0.7387073	0.7387073	0.7387073	0.7387073	0.7387073
Glucose transporter 2	1.167453	1.4233778	0.7163323	0.783573	0.756903	0.4313323	0.8332583	1.128574	1.207415	0.8945252	0.85130745	1.5878882	1.4378595	2.265954
Multidrug resistant protein-2	1.5341338	1.4399769	1.304655	1.2244033	1.0421566	1.6091985	1.18789	1.0005653	3.2028198	4.807093	0.1071862	0.8055096	0.65369104	1.370065
Multidrug resistant protein-1	2.3346238	2.0958408	1.943434	2.2719335	1.9071878	1.8822365	1.3722693	1.1376268	2.2431374	3.502903	0.30741515	0.70096517	0.53402223	1.7261709
Phosphatidylethanolamine-binding protein	1.0885434	1.0276623	1.546636	1.6241712	1.4001831	1.3017048	1.3017048	1.3017048	1.3017048	1.3017048	1.3017048	1.3017048	1.3017048	1.3017048
Phase-1 RCT-180	1.132526	1.0776639	1.2017014	1.4432919	1.5982949	1.3770821	1.2371017	1.2075325	0.9288778	0.98915654	1.5436482	1.1568912	1.2753901	1.3111224
Insulin beta-4	1.3114878	1.4232178	1.324651	1.6908343	1.4487395	1.1	1.0394302	0.9265357	0.9307798	0.9478289	0.8643266	0.9495312	0.81237143	0.56439394
NADPH cytochrome P450 oxidoreductase	4.0808494	3.0027156	1.689282	2.0832083	2.0184879	2.1802892	1.8883207	1.8883207	1.8883207	1.8883207	1.8883207	1.8883207	1.8883207	1.8883207
Wdr1	1.5242809	1.3646875	1.2337272	1.1225349	0.9550196	0.8085765	0.9686537	1.0050466	0.9481719	1.1917216	1.4642729	0.8771716	1.0364027	1.1895821
Endogenous retroviral sequence, 5' and 3' LTR	0.5165893	0.8002911	0.8482144	0.9154013	0.7418485	0.8055225	0.9564804	0.93180577	0.93032163	1.0200286	0.482335932	0.7625042	0.70585215	0.6123458
Phase-1 RCT-53	0.97076885	0.867602	0.8535607	0.82420313	0.91859156	1.0179054	0.9564804	0.93180577	0.93032163	1.0200286	0.482335932	0.7625042	0.70585215	0.6123458
Phase-1 RCT-54	0.84812634	0.907194	0.8142359	0.973708	0.9316063	0.9507991	1.0546969	1.0162714	1.0381478	1.0987533	0.7428401	0.94926643	1.0464561	0.57289474
Phase-1 RCT-240	1.0712868	1.1249552	0.689027	0.7642193	0.8072651	0.8471472	0.90102226	0.8965228	0.94851345	1.1326519	0.97196394	1.4640984	1.3798085	1.4363514
Osteopontin	1.0851002	1.0320269	0.7493095	0.70675945	0.8110116	0.7564688	0.6593668	0.6593668	0.6593668	0.6593668	0.6593668	0.6593668	0.6593668	0.6593668
Organic anion transporting polypeptide 1	1.1884532	1.1025358	1.5712716	1.7808882	1.286136	2.308688	1.1476566	0.9430128	1.0049532	1.1150111	0.9430128	1.0049532	1.1150111	0.9430128
Phase-1 RCT-241	1.0597084	1.2068901	1.1760324	0.93200153	0.9607073	0.846048	0.8304608	1.028387	1.0802159	1.2358574	0.7835903	1.7342552	2.8541074	1.1829597
Tissue factor pathway inhibitor	0.73125684	0.8186278	1.2516875	0.9085196	0.9598743	0.869182	0.930282	0.9462118	1.2123314	1.0301903	1.2323889	1.201351	1.081317	1.1820864
Cyclin-dependent kinase 4 inhibitor p27kip1 (allotype)	1.0933156	0.9859917	0.89027317	0.692016	0.86801375	0.7301155	0.5850539	2.082097	2.2434613	1.93203	1.1681572	1.098278	1.2812824	0.6247462
Phase-1 RCT-2	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712	1.2126712
Phase-1 RCT-59	1.2348436	1.1883724	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895	0.8971895
Phase-1 RCT-288	0.9290739	0.97075635	0.8468909	0.8673317	1.0037491	1.0501468	1.2900573	1.1537061	1.0213586	1.0051054	0.9889177	1.08188	1.0943451	0.9582608
Phase-1 RCT-113	1.146887	1.1534777	1.1180566	1.0505307	1.0380102	0.94721204	0.9866866	1.0371937	1.310019	1.3834689	0.5310385	0.8518387	0.8803909	0.9871864
Adenine nucleotide translocator 1	1.220433	1.4787749	0.8130558	0.8281134	0.8093503	0.8342373	0.8342373	0.8342373	0.8342373	0.8342373	0.8342373	0.8342373	0.8342373	0.8342373
Alpha-1 acid glycoprotein	2.6862674	4.658697	0.9496379	0.6038814	0.6561565	0.441198	0.7183224	0.83157027	0.8693422	0.594058	2.4584286	2.0847948	2.0847948	2.0847948
MHC class II antigen RT1.B-1 beta chain	0.93840235	0.8297566	0.83702844	1.085187	0.8182763	1.2639391	1.1652542</							

Organic cation transporter 3	1.3008914	1.6115648	0.9286987	0.88306235	0.82173814	0.8449113	0.77970564	0.8303689	1.5228431	1.090539	1.4369866	1.3697642	1.4111731	1.9091
Hypoxia-inducible factor 1 alpha	1.1791086	1.0043509	0.87091506	0.82516394	0.7562802	0.5694877	0.72094613	0.8248941	1.1681357	1.4653345	0.6414751	1.5693697	1.8714638	0.8284366
Phase-1 RCT-43	0.94863844	0.8375707	0.7806597	0.83074284	0.85901566	0.9695021	1.0687524	1.1066555	1.16891	1.1559066	0.8717559	1.0426915	1.2973042	0.6902607
Phase-1 RCT-45	0.9024157	0.98512496	0.8353997	0.83074284	0.83121127	1.2782364	1.2554395	1.2278699	1.2784302	1.2418608	0.8037108	1.2291647	1.3485912	0.57889605
Malate dehydrogenase, cytosolic	1.1497169	0.8743665	1.0918174	1.028373	1.2735565	1.6933208	1.2160175	1.1374211	0.87454634	0.44124624	1.1657948	1.2058377	1.2885737	1.8240716
VI30 element	0.47812206	0.52471316	0.89726598	0.622607	0.4614071	0.7746	0.6278817	0.6417685	0.82097235	0.3450613	1.0459129	0.9880063	0.80768556	0.68844014
Phase-1 RCT-189	0.9467965	0.7826163	0.7868117	0.775535	0.7189452	0.7283643	1.0891483	0.76307045	0.816683	0.75143224	2.0689719	1.0054439	1.0387983	1.6078391
Alpha-fetoprotein	1.5346263	1.500656	0.8921707	0.78913873	0.84834254	1.5681044	1.5194654	1.3890906	1.046298	0.8853854	0.83712065	1.0589288	1.1354331	
Calgranulin B	0.87528464	0.8776197	1.0237689	1.1195464	1.3469073	1.5681044	1.0713588	1.0337911	0.7632914	0.7915855	1.0461301	1.238588	1.5657574	1.4918704
Tissue plasminogen activator	0.95636946	1.077457	1.0534955	0.9289463	1.0404052	1.105614	1.0593444	0.9450753	0.8078748	0.7724025	1.340205	1.1201128	0.9980957	1.0743206
Phase-1 RCT-195	1.0832429	0.8672703	0.8457269	0.88711303	0.9324335	1.530733	1.0593444	0.7668865	1.3316345	0.9650653	1.7726935	0.8529716	1.1702722	1.3617789
Phase-1 RCT-196	0.63131595	0.8744925	0.7414555	0.67297137	0.3435729	0.38188394	0.5598473	0.7068865	1.0562371	0.8536232	1.1746052	0.9021784	0.93244845	1.0309957
Phase-1 RCT-221	0.82842636	0.9178771	1.08238	1.0220344	1.173214	1.3188265	1.1271222	1.1258944	0.800716	0.7596816	0.9280656	0.87500155	0.9647531	1.0309957
Phase-1 RCT-234	1.045845	1.0165571	1.1783431	1.1580829	1.045498	1.137591	1.0777352	1.1939354	0.9212778	0.8518884	0.9280656	0.87500155	0.9647531	1.0309957
Phase-1 RCT-151	1.0418745	1.1052159	1.2155454	1.2653539	1.1910245	1.4527278	1.2244519	1.1509354	0.9212778	0.8518884	0.9280656	0.87500155	0.9647531	1.0309957
Phase-1 RCT-158	1.1354426	1.1796067	1.1978168	1.0548937	1.0454806	0.945207	1.025768	1.1132764	0.9200091	1.1289484	0.77806026	0.8739955	1.2169837	0.77556585
Phase-1 RCT-221	1.1080614	1.1173956	0.7766395	0.80030893	0.8545553	0.75882588	0.81834866	0.8382678	1.1989742	1.220203	0.8685025	0.9643271	1.119747	1.0156262
Phase-1 RCT-235	1.199045	1.209758	0.87625375	0.74651474	0.7704823	0.7044417	0.80665624	0.7995034	1.2784948	1.2962183	0.86409166	1.0046889	1.2524043	1.1093826
Organic anion transporter 3	1.0294556	1.0789193	1.0967109	1.2803571	0.9622554	1.0889704	0.9815659	0.8455374	1.0470888	1.308735	0.74752533	1.3064688	1.1967112	0.7357841
Matrix metalloproteinase-1	1.0331739	1.1545676	0.7825567	0.78120765	0.81541306	1.0438896	0.7833338	0.8213148	1.231405	1.1117179	0.7683396	0.66487163	0.8457176	0.8538271
Matrix metalloproteinase-1	0.4028435	0.42798862	0.8492887	0.51525813	0.46051115	0.30105698	0.61636084	0.6516824	0.88651561	0.5161849	2.485853	1.0747353	1.2703173	1.8503121
Urokinase-type plasminogen activator	1.1462754	1.2530512	1.0371894	1.0259414	0.9498988	0.8385461	0.6587466	0.7160929	0.6472754	0.82816195	0.97280665	1.0761435	0.91478388	0.95177155
Phase-1 RCT-212														
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour pretreatment periods (Table 10).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=incr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 19 and as included in Table 26)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)

Phase-1 RCT-32	0.8221412	0.9422763	0.9613978	0.9894478	0.9984191	0.9294055	0.9163301	0.957783	1.281407	1.0253451	1.4816076	1.2684104	1.330037	1.6498477
Peroxisome assembly factor 1	0.95769728	0.87218034	0.7710701	0.9293881	0.9458653	0.9201400	0.8374128	1.1314152	0.9180719	1.0622539	0.9523774	1.0788538	1.0659877	1.0659877
8-oxoguanine DNA glycosylase	0.9898984	0.8375038	0.9007015	0.9357106	0.8031893	0.84116546	0.8255948	1.1208314	1.0118563	0.8362205	0.8959568	0.85190624	0.89518575	0.89518575
Phase-1 RCT-82	1.0560724	0.80767654	0.75187127	0.8997319	0.8659717	1.1406559	0.8954067	1.1208314	1.0340884	1.0242131	0.8278225	0.8001953	0.9842041	0.9842041
Malin F/G	0.8890115	1.0277851	1.1354303	1.9353391	1.3073263	1.2401818	1.2411575	1.230181	0.95446834	0.8340747	0.8637535	0.9647535	0.75440553	0.75440553
Phase-1 RCT-184	0.9673016	1.2223771	1.1242825	0.9640706	0.9120047	1.081168	1.0471695	1.0730258	0.70318	0.883845	0.908302	1.0034544	0.931503	0.931503
Phase-1 RCT-168	0.94150996	1.127596	1.1463357	1.253256	1.2167274	1.3616538	0.8950158	1.1895282	0.8545135	0.8652108	1.126178	0.9059465	0.9023772	0.9023772
Phase-1 RCT-119	0.8915655	0.6487432	0.8487079	0.9331635	0.8697157	1.0528597	0.8590158	1.054244	1.1274678	0.7659599	0.8686878	0.7454604	0.6231933	0.6231933
Carbonic anhydrase II	1.0734322	1.0431467	1.1236131	0.8210188	0.8562038	0.8373073	0.9516235	0.9304921	0.840382	0.9345343	1.00265	1.17492	1.105324	1.105324
Triphosphonate hydrolase	0.9910583	0.7573277	0.97018355	0.87304884	0.8604938	0.7317916	0.8278563	1.0644376	1.0530109	0.86049786	0.85712874	0.7647272	0.8119398	0.8119398
Phase-1 RCT-171	0.8621093	0.7467654	0.7648594	0.7629448	0.8001702	1.1282955	0.9777816	1.0644376	1.0530109	0.86049786	0.85712874	0.7647272	0.8119398	0.8119398
Phase-1 RCT-161	0.9231412	0.7013313	0.7716823	0.9038885	0.8604938	0.7317916	0.8278563	1.0644376	1.0530109	0.86049786	0.85712874	0.7647272	0.8119398	0.8119398
Phase-1 RCT-144	1.9731043	1.1189386	0.7611967	0.8410156	0.8247168	0.7340387	0.8383175	1.0031679	0.955704	0.80023396	0.8104371	0.7647272	0.8119398	0.8119398
Phase-1 RCT-225	1.0402914	0.9379485	1.2064614	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875	0.98261875
Cytochrome P450 2E1	0.94155945	0.6870816	0.7168643	0.8520435	0.804006	1.2231511	0.93854505	0.9827125	0.93854505	0.9827125	0.93854505	0.9827125	0.93854505	0.93854505
Thioredoxin-1 (Trx1)	1.6209542	1.8408374	0.9015483	0.9116814	0.8979649	0.8021118	0.9116814	0.8979649	0.8021118	0.9116814	0.8979649	0.8021118	0.9116814	0.9116814
Carbonic anhydrase III	0.7707625	0.7469448	0.8002118	0.9116814	0.8979649	0.8021118	0.9116814	0.8979649	0.8021118	0.9116814	0.8979649	0.8021118	0.9116814	0.9116814
Phase-1 RCT-140	1.637163	2.541842	1.6209542	1.8408374	0.9015483	0.9116814	0.8979649	0.8021118	0.9116814	0.8979649	0.8021118	0.9116814	0.9116814	0.9116814
Condensin component C3	0.7759472	0.65276217	1.3435231	0.93715378	0.82325187	0.8517851	0.7750775	0.70441395	1.067198	0.69157696	0.8741781	0.953665	0.8652424	0.8652424
Glucokinase	0.8464473	0.6063217	0.93715378	0.82325187	0.8517851	0.7750775	0.70441395	1.067198	0.69157696	0.8741781	0.953665	0.8652424	0.8652424	0.8652424
Phase-1 RCT-173	0.78176337	0.6231405	0.8889163	1.1544213	1.2086265	1.0027827	1.041308	0.80766335	0.98899287	0.7269414	1.0352946	1.245571	0.9525104	0.9525104
3-methylglutamate DNA glycosylase	1.0098007	1.8145205	1.3331455	1.1944213	1.2086265	1.0027827	1.041308	0.80766335	0.98899287	0.7269414	1.0352946	1.245571	0.9525104	0.9525104
Peroxisomal multifunctional enzyme type II	0.9098007	1.8145205	1.3331455	1.1944213	1.2086265	1.0027827	1.041308	0.80766335	0.98899287	0.7269414	1.0352946	1.245571	0.9525104	0.9525104
Phase-1 RCT-40	1.141519	1.5901107	1.4868558	0.9602035	1.0303338	1.0027827	1.041308	0.80766335	0.98899287	0.7269414	1.0352946	1.245571	0.9525104	0.9525104
Sentescence marker protein-30	0.8227852	0.824947	0.7180892	0.9429215	0.7115522	0.8950898	0.5862093	1.4022173	1.0101626	1.2525996	0.9957031	1.0076786	1.1274757	1.1274757
Cyclin G	0.9304403	0.842947	0.7180892	0.9429215	0.7115522	0.8950898	0.5862093	1.4022173	1.0101626	1.2525996	0.9957031	1.0076786	1.1274757	1.1274757
Melanoma-associated antigen ME491	1.3312546	0.842947	0.7180892	0.9429215	0.7115522	0.8950898	0.5862093	1.4022173	1.0101626	1.2525996	0.9957031	1.0076786	1.1274757	1.1274757
Phase-1 RCT-28	0.9500589	0.8511767	0.7394339	0.8268673	0.843356	0.8210998	0.8000304	1.0716753	1.0264339	0.9282906	1.0704873	0.8654256	1.0411754	1.0411754
Alcohol dehydrogenase 1	0.9152854	2.073528	1.4454943	1.0572027	1.1073241	0.82912457	0.8947648	0.8820131	0.6284966	1.0397706	0.9609228	0.89539039	1.0037388	1.0037388
Stem cell factor	0.78911865	1.6374376	1.2561315	1.1956148	1.068141	0.8214269	0.9694981	0.7166394	0.8127083	1.0443331	0.8657854	0.8627877	0.7839587	0.7839587
JNK1 stress activated protein kinase	0.9771728	1.457107	1.6557335	1.1437895	1.1221539	1.3147592	0.926503	1.0689761	0.8531374	1.071512	1.003365	1.0037388	0.8011062	0.8011062
Protein tyrosine phosphatase alpha	0.9771728	1.457107	1.6557335	1.1437895	1.1221539	1.3147592	0.926503	1.0689761	0.8531374	1.071512	1.003365	1.0037388	0.8011062	0.8011062
Phase-1 RCT-55	1.0385554	0.6657197	0.862597	0.9515996	0.6840434	0.7633085	0.8863395	1.071768	1.426228	0.75257814	0.7812854	0.7258865	0.75351673	0.75351673
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.359906	1.175597	1.1235003	1.1700889	1.301768	0.8863395	1.071768	1.426228	0.75257814	0.7812854	0.7258865	0.75351673	0.75351673	0.75351673
DNA topoisomerase I	1.4878061	2.205893	1.6377882	1.648887	1.8595204	1.4872819	1.8480041	0.7665569	1.1197311	0.91378035	1.071149	1.535813	1.415415	1.415415
Phase-1 RCT-280	1.0611261	1.8902006	1.3989136	1.2766737	1.3155366	1.2888817	1.0768455	0.8511196	0.952498	0.82335305	1.4219852	1.3210025	1.157828	1.157828
Superoxide dismutase Mn	1.4110487	1.4506973	1.454229	1.0831802	1.080066	1.1309911	0.9816798	1.1272775	0.9243727	0.7973308	0.785205	0.854552	1.189184	1.189184
Beta-tubulin, class I	0.9401471	1.0975928	0.9845795	1.1117284	0.9267624	0.8627005	0.8048145	0.90243727	0.7973308	0.785205	0.854552	1.189184	1.189184	1.189184
Cardiomy phosphatase synthetase I	1.933174	2.3363612	1.672456	1.2911649	1.4282088	1.5306454	1.4037429	0.9238005	1.2237758	0.8261807	1.0768815	1.2308604	1.0458015	1.0458015
Decylglycerol kinase zeta	0.9875365	0.7555912	0.9033586	0.9816287	0.9846138	0.9276283	0.9374577	1.0028544	1.045723	0.8602213	1.0825262	1.072117	1.0599191	1.0599191
Phase-1 RCT-141	1.937032	2.019231	0.8543254	1.428568	1.082009	0.9276283	0.9374577	1.0028544	1.045723	0.8602213	1.0825262	1.072117	1.0599191	1.0599191
Gamma-actin, cytoplasmic	1.2672269	1.4354435	1.1955436	1.0651785	1.551892	1.014187	1.6140575	0.8505758	0.8806675	0.7315026	0.5187469	0.62054207	0.8118081	0.8118081
Ribosomal protein L13A	1.3930826	1.2527114	1.2474404	1.3320684	1.4814543	1.2703854	1.6974485	0.725181	0.908575	0.7946933	0.946875	1.0583317	0.97882706	0.97882706
Phase-1 RCT-45	1.3111361	1.704274	1.704274	1.5874787	1.2846203	1.5491813	1.341484	1.0037887	1.2603924	1.1278162	0.93291567	0.9278259	0.917038	0.917038
Jun	0.8555344	0.8388063	0.75412537	0.9687925	0.7589916	0.6571576	0.7010458	1.115933	1.070448	0.8952278	0.90958554	0.9040034	0.9454216	0.9454216
Protein O-mannosyltransferase 1 (Pomt1)	0.9034101	0.85180823	0.4947094	0.68062	0.549887	0.47763473	0.6814804	1.1655014	1.1333174	0.8168195	1.1970849	1.064776	1.2469491	1.2469491
PKM Cdk reductase	0.73259246	0.63659807	0.97865245	1.3023512	0.69105334	0.7257141	0.75923955	1.0035798	0.8378938	1.1239696	0.8300073	0.81802487	0.8104022	0.8104022
Phase-1 RCT-12	0.8894754	1.0045213	0.8060073	0.925151	0.87826743	0.80386327	0.84206223	0.91688373	0.8984648	0.87394685	0.9271374	0.9074549	0.98556905	0.98556905
Inhibition related developmental regulator PRD1 (PC4)	1.598326	1.833224	0.8581449	1.001286	1.098817	1.1304364	1.06948	1.095503	1.2778831	1.3860478	1.3728855	1.4572014	1.453324	1.453324
Glucose-regulated protein 78	1.804386	1.688545	1.0478301	1.593763	1.3594155	0.8774067	0.7846615	1.014508	0.8395816	1.0621889	1.0326233	1.1827425	1.2185149	1.2185149
3-beta-hydroxysteroid dehydrogenase (HSD3b1)	0.7389792	0.8587649	1.4353078	1.1599782	1.2762829	1.313546	0.7672739	0.8481693	0.62639457	1.3121604	1.1508828	1.2062666	1.2062666	1.2062666
Caspase 6	0.35818436	0.7816393	0.86489785	0.9745107	0.8827583	0.863731	0.924529	1.226423	1.059532	1.0215634	1.038705	0.9816207	1.1292715	1.1292715
Phase-1 RCT-169	1.1181076	0.878785	0.8481827	0.8763393	0.51485723	0.7601223	0.9086439	1.265717	1.0787144	1.0394231	1.0613164	1.0498644	0.9680494	0.9680494
Phase-1 RCT-197	1.0100639	1.0068739	0.72831653	0.8733414	0.6326824	0.8402675	0.8918297	1.041512	1.049218	1.2352865	1.0782217	1.0739248	1.1294012	1.1294012
Phase-1 RCT-34	0.85589904	0.7197371	1.1397501	0.9509527	0.8389707	0.8618721	0.97822183	1.1307684	1.2582938	0.9021536	0.8470553	1.0355276	1.0917328	1.0917328

Phase-1 RCT-172	0.8964684	0.7644584	0.936689	0.5028922	0.5953944	0.78815025	1.3759011	1.0387912	1.1626867	0.90851295	0.9037745	0.9709576	0.8898485
Protein kinase, muscle	0.92841677	0.6336923	0.9047543	0.936325	0.9328756	1.0181215	0.8364234	0.931533	1.2481704	1.05892	0.9539346	0.93795146	0.9791766
Phase-1 RCT-288	0.7602459	0.64262285	0.7151628	0.945078	0.945078	1.1844393	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303
Phase-1 RCT-289	0.8607425	0.64262285	0.7151628	0.945078	0.945078	1.1844393	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303	0.9835303
Cytochrome P450 2C39 (allervate clone 2)	2.2703407	1.412704	1.1762864	1.2656177	1.7378432	2.314072	1.9316337	1.9316337	1.9316337	1.9316337	1.9316337	1.9316337	1.9316337
Phase-1 RCT-290	2.060972	1.5371866	1.0773304	1.1628001	1.0834618	0.99248976	0.73327554	1.1537977	1.2808994	1.0872321	1.2118905	1.2372141	0.9531914
Phase-1 RCT-291	0.4630954	0.4977608	0.773304	1.1628001	1.0834618	0.99248976	0.73327554	1.1537977	1.2808994	1.0872321	1.2118905	1.2372141	0.9531914
Methylglutaryl-CoA reductase alpha	1.3272946	2.105478	1.655291	1.3269701	1.4680249	1.3962631	1.3119005	0.8559905	1.0201492	1.5402112	1.2013157	1.2013157	1.558474
Cytochrome P450 1A2	0.8436375	0.66745025	0.089378	1.2520905	0.7656363	1.3562811	0.9985139	0.945337	1.3842534	0.9524534	0.9341866	0.9341866	0.9341866
Phase-1 RCT-287	0.7848915	0.6030763	0.7656363	1.2520905	0.7656363	1.3562811	0.9985139	0.945337	1.3842534	0.9524534	0.9341866	0.9341866	0.9341866
Monamine oxidase B	1.825816	1.387484	1.094321	1.195363	1.335622	1.569468	1.5697708	1.0855031	1.1384253	1.2286354	1.478617	0.7513426	0.658884
Phase-1 RCT-264	1.719352	2.053404	1.043033	1.054321	1.1248744	0.6763565	0.8032866	1.1870173	1.1259253	1.2286354	1.478617	0.7513426	0.658884
Peroxisome proliferator activated receptor gamma	0.8528603	1.043033	1.043033	1.054321	1.1248744	0.6763565	0.8032866	1.1870173	1.1259253	1.2286354	1.478617	0.7513426	0.658884
Phase-1 RCT-143	1.350643	1.4863332	1.0260722	1.054321	1.1248744	0.6763565	0.8032866	1.1870173	1.1259253	1.2286354	1.478617	0.7513426	0.658884
Phase-1 RCT-251	0.8642296	0.560845	1.16351	1.054321	1.1248744	0.6763565	0.8032866	1.1870173	1.1259253	1.2286354	1.478617	0.7513426	0.658884
Phase-1 RCT-117	1.3241615	1.00335	0.9661215	1.17211	1.0589184	0.7355881	1.0506797	0.9142735	0.9142735	0.9142735	0.9142735	0.9142735	0.9142735
Glutathione S-transferase beta-1	0.8653818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-41	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-142	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-141	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-140	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-139	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-138	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-137	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-136	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-135	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-134	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-133	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-132	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-131	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-130	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-129	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-128	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-127	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-126	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-125	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-124	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-123	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-122	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-121	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-120	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-119	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-118	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-117	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-116	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-115	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-114	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-113	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-112	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-111	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-110	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-109	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-108	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-107	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-106	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-105	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-104	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-103	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-102	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-101	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1.203531	0.9077408	0.91677634	0.91677634	0.91677634	0.91677634	0.91677634
Phase-1 RCT-100	0.8533818	0.6940248	1.1788002	0.877451	1.047223	0.8919676	1						

Phase-1 RCT-3	0.8719014	0.6752765	0.6169084	0.8549821	0.8310048	0.7373769	0.7427037	1.0030544	1.2264663	0.9414655	0.8955667	0.8880112	0.9385566	1.0166568
Falun beta (FaluB)	1.2802441	1.87001	1.2659246	0.9552474	1.4290243	1.2166636	1.2068755	1.2048755	0.9062156	0.8874787	1.0296759	1.0588497	0.9967645	0.9372777
3-hydroxyisovalerate dehydrogenase	1.3004753	1.2894565	1.3773757	1.0456466	1.2571977	1.219532	1.219532	1.219532	0.6518013	0.8713128	0.9226565	0.9173128	1.2705361	0.9343415
Carbonic anhydrase III, sequence 2	0.9134101	2.0560778	1.0309578	0.8881279	1.9243288	1.5975764	1.5920345	1.1138862	0.9167064	0.9167064	1.1896433	1.1978607	1.1671682	0.7675437
Phase-1 RCT-10	1.3700948	1.3141075	1.2435148	1.2657766	1.2458141	1.2107177	1.2107177	1.2107177	0.9381713	0.9381713	1.0571731	1.0571731	1.0571731	0.9381713
Alpha-2-microglobulin	0.8286856	1.1698159	1.0847137	0.6416656	1.2515589	0.9475518	0.9475518	0.9475518	0.9475518	0.9475518	0.9475518	0.9475518	0.9475518	0.9475518
Dynactin-1 (D100)	1.2192806	1.2648974	1.2107583	1.1176812	1.3426348	1.2103345	1.2103345	1.2103345	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
LYM1 esterase	0.8105777	0.6136956	0.34597	0.9022305	1.1161616	0.8594723	0.8594723	0.8594723	0.8594723	0.8594723	0.8594723	0.8594723	0.8594723	0.8594723
Phase-1 RCT-252	1.7807349	2.4302902	1.7457626	1.2355468	1.4343934	1.4343934	1.4343934	1.4343934	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Phase-1 RCT-259	1.0821835	1.1814677	1.1514566	1.3084675	1.0361987	0.9745534	0.9745534	0.9745534	0.9745534	0.9745534	0.9745534	0.9745534	0.9745534	0.9745534
Phase-1 RCT-278	1.3645263	1.9482674	1.0924875	1.1617787	1.2744539	1.1919564	1.1919564	1.1919564	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Phase-1 RCT-42	0.9612843	1.490036	0.786847	1.241323	1.0654632	0.9250969	0.9250969	0.9250969	0.9250969	0.9250969	0.9250969	0.9250969	0.9250969	0.9250969
Phase-1 RCT-25	1.2116795	1.6228507	0.9861189	1.0460001	1.0791037	1.009426	1.009426	1.009426	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Myochromin P450 2C11	1.3892029	1.4176881	0.863776	1.004817	0.9598793	0.7066153	0.7066153	0.7066153	0.7066153	0.7066153	0.7066153	0.7066153	0.7066153	0.7066153
Phase-1 RCT-202	1.0405994	1.496153	1.3282173	1.3308641	1.3477242	1.3589465	1.3589465	1.3589465	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Complement factor I (CFI)	1.9419388	1.9341381	1.3828713	0.959108	0.8159545	0.8066305	0.8066305	0.8066305	0.8066305	0.8066305	0.8066305	0.8066305	0.8066305	0.8066305
Proliferating cell nuclear antigen gene	1.3857287	0.9707131	0.7591933	1.1154406	1.2974913	1.1226985	1.1226985	1.1226985	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Activating transcription factor 3	1.7432088	0.6653983	1.1154406	1.0970353	1.0671294	1.1137056	1.1137056	1.1137056	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Focal adhesion kinase (pp125FAK)	1.3911356	1.0130914	0.8324746	1.1217798	1.2001828	1.1137056	1.1137056	1.1137056	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254	0.9443254
Phase-1 RCT-283	1.143574	1.156081	1.3554294	0.839194	0.9331705	1.2385956	0.9844644	1.016282	1.124977	1.3653688	1.204115	1.4941527	1.1007291	0.8418368
Phase-1 RCT-269	1.5668878	1.334588	0.7834374	0.8839194	0.9331705	1.2385956	0.9844644	1.016282	1.124977	1.3653688	1.204115	1.4941527	1.1007291	0.8418368
Iron-responsive element-binding protein	1.1868817	1.1498272	1.1894493	0.9527456	1.1374741	1.016282	1.124977	1.3653688	1.204115	1.4941527	1.1007291	0.8418368	1.2145352	1.1418368
MHC class II antigen RT1A10 beta-chain	0.42779258	0.5429683	0.7571632	0.9681833	0.6395944	0.7121075	0.802391	1.640516	1.695062	0.86223195	0.9585427	0.9129368	0.804375	1.1343532
AT1 subunit	1.9319028	1.434257	1.8265247	1.1218993	1.2502592	1.669263	1.583731	2.583941	1.392626	1.1905118	0.9226347	0.9603928	0.801448	0.8955626
Phase-1 RCT-171	0.8675757	0.733325	0.8708443	0.9821231	0.9338302	0.86738145	1.054957	1.062709	0.7314637	0.8623333	0.919231	0.86455067	0.8935938	0.9918941
Phase-1 RCT-43	0.8245855	0.7433325	0.8708443	0.9821231	0.9338302	0.86738145	1.054957	1.062709	0.7314637	0.8623333	0.919231	0.86455067	0.8935938	0.9918941
Phase-1 RCT-270	1.0953948	1.1445566	1.4926891	1.0451792	1.2079658	1.2088535	1.3416092	0.9041092	0.9902099	1.0571306	0.8544738	0.6962595	0.9053668	0.7447391
Colony-stimulating factor-1	1.1212391	1.1506716	1.150774	1.2607093	1.2495036	1.2104198	1.3683338	0.867008	0.9471523	1.0215753	1.0300275	0.9800728	1.116445	0.9800728
Phase-1 RCT-62	0.9628778	0.9015904	0.9253597	1.0360582	0.97505146	0.8714666	0.84973425	1.000052	1.4846786	1.0469228	0.9241216	1.0411748	0.8290001	0.9805549
Phase-1 RCT-22	0.9313862	0.7675747	0.9434841	0.8265324	1.0685953	0.8429699	1.193863	0.9821584	1.030871	0.9807754	0.8333795	0.85554844	0.8290001	0.9805549
AT-3	0.9077578	0.8395485	0.9739843	1.0777308	1.0355065	0.8713304	0.8493921	1.0457088	0.9693123	1.1611369	1.1031704	0.8989498	1.0186012	1.0275601
Phase-1 RCT-18	0.8832683	0.8160572	0.8398494	0.86016165	0.8949907	0.9456294	0.85747355	0.87488528	0.9693123	1.1611369	1.1031704	0.8989498	1.0186012	1.0275601
Phase-1 RCT-123	0.962006	1.0249429	0.7607854	0.90235613	0.91103965	0.8430384	1.0634174	1.0715858	0.9155978	0.8922961	0.89764076	0.878736	0.8876132	0.9115797
Phase-1 RCT-56	0.93778745	1.2356134	1.1258495	1.0672197	1.0120778	1.0953792	1.4513862	0.8158477	0.8959579	0.8960665	0.8960665	0.8960665	0.8960665	0.8960665
Equilibrative nucleoside transporter	0.8563785	0.8614269	0.8068411	0.8153412	0.8950926	0.8994102	1.2377571	0.83005704	0.7427623	0.7641416	0.8881791	0.90572804	0.98629754	0.79613787
Glucose transporter 2	0.92348765	0.8012118	1.0538887	1.3476316	0.8047159	0.83382263	1.0647353	1.1024265	0.9504385	1.2355594	0.9421945	0.95030504	0.773038	0.8583566
Multidrug resistant protein-2	1.1486478	1.1094457	0.8564544	1.0017657	0.71132654	1.1167126	0.7120512	1.3782572	0.9226889	1.2510734	1.0185408	0.9867887	0.91780045	1.0745374
Multidrug resistant protein-1	0.96528757	0.9473273	1.160759	0.9601741	0.7923429	1.1376871	0.79307475	1.3454603	1.3751854	1.2407694	0.9916626	0.9740811	1.0101204	1.2810079
Phosphatidylinositol-3-OH kinase-binding protein	0.8674455	0.9158802	1.1637789	1.2492301	0.9317801	0.9256471	0.7287727	1.1429607	1.5038207	0.846169	1.1057616	1.0902412	1.0848788	1.0659638
Integrin beta-4	1.1576403	1.019712	1.169241	1.161013	1.258844	1.2363382	0.93165067	1.0518327	1.3159133	0.9953854	1.2767365	1.118752	0.9976603	1.2694622
Phase-1 RCT-180	0.8600316	0.6291672	0.98631665	0.771826	0.8427226	0.77801627	0.6306737	1.132319	0.95419284	1.137621	1.0233933	0.86185017	0.9904998	1.099662
NAADPH cytochrome P450 oxidoreductase	0.9377471	1.091524	0.7434096	0.8948601	0.7057843	0.5861417	0.5288219	1.5557448	1.1617632	1.0528738	0.944655	1.027509	1.0734352	1.020664
Endogenous retroviral sequence, 5' and 3' LTR	1.9803123	1.4089432	0.7624358	0.9858094	0.8941272	0.780751	0.8281726	1.1538328	0.9341285	1.1173491	0.9143765	0.92119694	0.82664	0.9833333
Phase-1 RCT-53	1.2707925	1.4288716	1.0360342	0.9324505	0.5524622	0.7378115	0.7070123	0.8491284	1.0680732	0.7756257	0.86367474	0.9312242	0.8725562	0.9175526
Phase-1 RCT-54	1.6628599	0.7219317	0.8827721	0.9976095	0.9833105	1.0438644	0.82413738	0.8288644	0.82413738	0.8288644	0.8288644	0.8288644	0.8288644	0.8288644
Phase-1 RCT-240	0.7810893	0.56679065	0.9571992	1.136987	0.8197887	0.8250667	1.0940729	0.872453	1.2516133	0.8768613	0.8989052	1.0723473	0.88530654	0.9312242
Osteonectin	2.2395082	2.3402185	1.2530782	1.0980808	1.094106	1.1616181	1.2530782	0.6056596	0.858193	0.8942525	1.038193	0.90610654	0.7001515	0.7589397
Organic anion transporting polypeptide 1	1.056722	0.73982644	1.0722378	0.8918914	0.76888766	0.8333056	0.6926542	1.8819478	1.157778	1.157778	1.157778	1.157778	1.157778	1.157778
Phase-1 RCT-241	0.90897433	0.87740415	0.84145575	1.0271144	0.98408777	0.81695485	0.86961307	1.0136344	1.0477456	1.0032991	1.3117841	1.0619718	1.0317837	1.3617034
Tissue factor pathway inhibitor	1.2503307	1.1556181	1.0391802	1.1529817	1.067172	1.0362271	0.9414009	0.9063368	1.0786034	1.3328459	1.061179	1.0022012	0.9967693	1.2770554
Cytidine-dependent kinase 4 inhibitor P27/hp1 (alternates)	1.0925272	0.84062034	1.410548	1.6339346	1.023674	0.5082839	0.7526615	1.4057772	1.2420771	0.7526615	0.7526615	0.7526615	0.7526615	0.7526615
Phospholipase D	0.464501	0.6340565	0.8401985	0.36074203	0.5082839	0.7526615	1.4057772	1.2420771	0.7526615	0.7526615	0.7526615	0.7526615	0.7526615	0.7526615
Phase-1 RCT-38	0.960673	0.7834398	0.95236105	0.5764264	0.8065407	0.9941	1.1324729	1.0541834	0.981107	1.0541834	0.981107	1.0541834	0.981107	1.0541834
Phase-1 RCT-258	0.9808573	0.9831447	1.0519596	1.1169324	0.9533182	0.7756994	0.74075894	0.9851241	1.0427383	1.0023911	1.0745571	1.0158377	1.0263178	1.0533778
Phase-1 RCT-113	0.76396877	0.8537632	1.0677714	1.0176572	1.0855368	1.0053838	0.9210098	0.9710098	0.9710098	0.9710098	0.9710098	0.9710098	0.9710098	0.9710098
Adenine nucleotide translocator 1	0.8074484	0.65257088	1.2100717	1.0993939	1.057175	1.1601181	0.7423933	0.9788285	1.0788285	1.0788285	1.0788285	1.0788285	1.0788285	1.0788285
Alpha-1 acid glycoprotein	4.436916	1.416498	1.429752	1.2293968	1.8804938	1.4224741	2.9030443	1.932294	3.3139992	2.1956988	2.234238	2.171777	5.74953	4.74953
MHC class II antigen RT1.B-1 beta-chain	0.5496104	0.5065843												

Organic cation transporter 3	1.9435028	1.4173448	1.0096251	1.0687086	1.1920172	1.2287734	1.2198074	0.7094058	0.99807134	0.85455906	1.1509087	1.125761	1.0611459	1.5157013
Hypoxia-inducible factor 1 alpha	0.9126284	0.6216578	0.7798134	0.9327847	0.9546215	1.0939548	1.0771381	0.8627781	0.8627781	1.0801255	0.9421686	0.9665511	0.9208431	0.9626725
Phase-1 RCT-43	0.9205094	0.6701385	1.282464	1.0453371	1.0132847	1.0286285	1.2245867	0.8627781	1.1851089	0.9212502	0.9162903	0.8742835	0.9384964	0.8243379
Phase-1 RCT-45	0.71097124	0.5945181	0.78534615	0.86276406	0.89352955	0.91803273	0.84130454	0.9562561	1.0488483	1.0162268	1.041767	0.8371233	0.94939403	1.040805
Mitotic dehydrogenase, cytosolic	2.4914646	2.2024167	1.3029632	1.156894	1.2115399	1.2458149	1.276126	1.0281216	0.9284128	0.9602873	1.0999607	1.1729221	1.1528748	0.920809
W30 element	0.8330401	1.5251584	1.2661577	0.98589915	0.8684678	0.65811583	1.0363929	0.79553145	0.9634695	0.90755083	0.9535677	1.1760662	0.8280835	0.83778495
Phase-1 RCT-169	1.9821689	1.5108743	1.5608024	1.2336876	1.5221268	1.2031628	1.4402955	1.0084114	1.0630404	0.9528013	1.0843554	1.0088615	1.0755287	0.7645533
Alpha-fetoprotein	0.99918306	0.6507394	1.0280758	0.8030582	0.7052377	1.0746402	1.2074784	0.98100203	1.1284975	1.1082693	0.9889388	1.0150831	0.9235835	1.0374253
Calgranulin B	1.8123868	2.2632497	1.6321498	1.2048163	1.2470445	1.2065365	1.2485932	0.81873857	1.084478	0.78761923	1.0350759	0.9983143	1.1221168	1.027971
Tissue plasminogen activator	1.1204504	1.2216958	0.7624697	0.7046989	0.95540546	1.0989423	1.1705279	0.78712994	1.086318	0.9024543	1.005767	1.0534416	0.857667	0.86819774
Phase-1 RCT-195	1.2457328	1.0814751	1.2201411	1.2889227	1.1069793	1.0824293	1.0107511	1.047135	1.086318	0.9024543	1.2201571	1.1275752	1.1637158	1.1835684
Liver fatty acid binding protein	1.2735231	1.368836	0.56347033	0.8713243	1.1397182	1.0171932	1.7145325	0.6882353	0.9258212	0.87509125	1.1754105	1.2348591	1.3520682	0.9632812
Alpha-1 microglobulin/bikunin precursor (Amp)	1.5265242	1.9262435	1.9010815	1.2947071	1.4872898	1.5011393	1.1841938	0.8285346	1.0770204	0.9888501	1.0821768	0.87816896	0.91125258	0.8325113
Phase-1 RCT-294	0.8238479	0.6765473	1.198889	0.87427837	0.7458273	0.7538211	0.7697779	1.2111757	0.9439465	1.0821768	0.87816896	0.91125258	0.8325113	0.9555534
Phase-1 RCT-151	0.87615764	1.1324193	1.0501075	1.0579021	1.1604786	1.0792055	1.0374317	1.1405066	1.3191522	1.0113878	1.037076	1.0498581	1.0365332	1.2781514
Phase-1 RCT-221	0.90643954	1.2961017	1.0861791	1.0634004	1.0589052	1.0647916	1.2703807	0.8347601	1.2746607	0.89242508	0.78231514	0.8195989	0.9025177	1.0863505
Phase-1 RCT-235	0.9760755	0.75049734	0.950289	0.8291877	0.9242295	0.985668	1.0240872	0.9375747	1.2107277	1.0282974	0.8643346	0.8871032	0.7958452	0.8204901
Organic anion transporter 3	0.8121159	0.65013903	1.091432	0.8974137	0.6658453	0.6889242	0.6848023	1.4125377	1.1905576	1.2123615	0.96436814	1.0058602	1.0705271	0.9450047
Main metallothionein-1	0.81534785	1.0341309	1.3212502	0.8954585	1.2021214	1.424415	1.3794849	0.7562667	0.87159843	0.8821512	1.0250927	1.1596609	1.0747011	1.0295709
Urinary protein 2 precursor	1.6152259	1.8535222	0.8755273	0.83843356	1.2042204	1.1376203	1.976894	0.5765944	0.6756949	0.7863378	1.2072707	1.31891	1.3157353	1.0440644
Phase-1 RCT-212	1.130138	0.9721732	0.7315075	0.8424638	0.59629184	0.854425	1.0236936	0.8733825	0.7238772	0.8517733	1.0374804	0.9653602	0.96214837	1.0996416
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=ncr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 18 and as included in Table 26)														

Table 26

Table 2B. Expression Data for 6 Hour Timepoint (1)														
Compound-Dose (2)	GAN 200	GAN 200	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38	GAN 38
Animal Number (3)	2452	2453	221	222	223	224	225	226	227	228	229	230	231	232
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	1.2374921	0.91735635	1.822687	1.452451	1.418425	1.0239638	1.0873212	0.9726707	1.2437371	0.99561495	0.3317171	1.073048	1.1073048	1.6135948
Insulin-like growth factor binding protein 1	0.8373988	0.9546536	1.0703622	1.1456681	1.116924	1.0480762	1.0480762	0.9569735	1.0137774	1.0855021	1.273471	1.8127629	1.3033437	1.2639816
Gadd153	0.157576	0.9638143	1.0003286	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588	1.0189588
GMPC	1.409038	1.083331	0.9591495	1.0096685	0.9697488	0.974451	0.9436435	0.9739704	1.4792056	1.1551942	1.1605475	1.261693	1.0146464	1.0188811
NRK	1.6897217	1.6290391	1.3454684	0.796142	1.1159152	0.8537835	0.9143045	1.1194373	0.8249791	0.81057245	0.8053755	0.743895	0.8303828	1.4262623
Carnitine 1, sequence 2	1.4650349	2.0376222	1.0089239	1.0382954	0.8394849	1.068095	0.9503439	1.240006	0.953121	0.953121	0.953121	0.953121	0.953121	0.953121
Henna oxyrase	1.4730349	1.42	1.2715892	0.8716804	1.051684	1.0914787	0.9737318	1.0201067	0.8590411	0.7190712	0.7280587	0.6436811	0.8514545	0.9344932
Phase-1 RCT-109	0.7328635	0.8990381	0.8297273	0.6549847	0.65914718	0.6259423	0.7006911	0.81985756	4.480011	1.695183	0.96387368	1.0514545	0.7057405	0.9344932
Phase-1 RCT-111	1.3359839	1.050518	1.6717568	0.891394	1.1402718	0.901285	0.988495	0.91985756	4.480011	1.695183	0.96387368	1.0514545	0.7057405	0.9344932
Argininosuccinate lyase	1.3940769	1.2479088	1.253013	0.999557	1.1104017	0.9848635	1.0251644	0.780462	0.9898269	0.8044087	0.8746094	0.9627675	1.023542	0.8919177
DNA polymerase beta	0.7887462	0.264035	0.8054377	0.828024	0.8570571	0.5591383	0.8991843	0.7869213	0.8956784	0.764523	0.8927652	0.9928324	0.89688153	0.9070177
Phase-1 RCT-103	1.2246751	1.530037	1.050906	0.8454512	1.045922	0.9874271	1.166127	1.4541751	0.6685941	0.7350516	0.547791	1.2003582	1.0888069	1.1041471
Ribosomal protein S9	1.0678983	1.440423	0.9531116	0.925427	0.9512395	0.9049335	0.9500667	1.1923321	1.0255574	0.8314453	0.99358536	0.82333365	1.1250039	1.1250039
Phase-1 RCT-114	1.1548798	1.3877597	1.1249108	0.9284031	1.2165934	0.8420305	1.084207	0.9907706	1.2607885	1.4787289	1.4840046	1.0943378	1.0844562	1.2935307
Phase-1 RCT-15	1.6157172	1.699052	1.4845176	1.152255	1.3557	0.9761956	1.1075238	0.9362875	1.2988276	1.2100837	1.0129354	1.543825	1.5168259	1.222358
Macrophage inflammatory protein-2 alpha	1.3210475	1.103287	1.1873313	0.9874322	1.0158398	0.9814974	1.194387	0.882414	0.9835267	0.9288117	0.9288117	0.9288117	0.9288117	0.9288117
RGF-inducible anti-proliferative putative secreted protein (PUC)	0.9682885	1.011663	1.0660014	0.7824953	0.959707	0.9742805	0.8236854	0.9164657	2.2844381	1.5189747	1.201248	1.805149	0.89540744	1.1763282
Phase-1 RCT-191	1.1007444	1.071656	1.0216151	1.3724372	1.1463947	1.235918	1.049057	0.9232354	1.047835	1.3221132	1.749408	1.4434784	1.1270219	0.919763
Phase-1 RCT-45	1.7032654	1.639121	1.0283204	1.3083695	1.1138513	1.1201898	1.0240033	0.9355209	1.2555785	1.2944993	1.3084448	1.4531631	0.9895845	1.0002889
Cytidin D3	0.7139431	1.5551972	0.80376846	0.6872617	0.6903156	0.6956577	0.77849663	0.8878148	0.7287417	0.85705366	0.6254117	0.30178554	0.76894884	0.98410724
Phase-1 RCT-108	1.3295685	1.5551972	0.80376846	0.6872617	0.6903156	0.6956577	0.77849663	0.8878148	0.7287417	0.85705366	0.6254117	0.30178554	0.76894884	0.98410724
Phase-1 RCT-56	1.2196657	1.2230446	1.1670003	0.9750102	1.0812385	0.9750102	1.0812385	0.9750102	1.0812385	0.9750102	1.0812385	0.9750102	1.0812385	1.0812385
Phase-1 RCT-182	1.3787688	1.2327305	0.9856337	0.93154573	0.9070368	0.8875493	0.958925	0.9916016	1.3885722	0.8898075	0.8776518	1.0570194	0.88819827	1.1832284
Aspartate CoA carboxylase	0.960213	0.744401	0.8176536	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362
Phase-1 RCT-65	0.7934523	0.9284593	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362
Cystatin C	0.7530071	0.8294533	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362	0.826362
Phase-1 RCT-49	1.235155	1.407744	1.056196	1.4427084	2.524728	1.0033848	1.2688819	1.0145578	1.752212	1.3067504	0.8800361	0.8733536	0.8733536	0.8733536
Phase-1 RCT-9	1.1852394	1.1203744	1.1428536	0.7033794	0.853495	0.665117	0.7435297	0.8453357	0.8654864	0.6817534	0.7391627	0.98924385	0.71098754	0.95957433
Phase-1 RCT-156	0.7832739	0.9050026	0.9595904	0.7033794	0.853495	0.665117	0.7435297	0.8453357	0.8654864	0.6817534	0.7391627	0.98924385	0.71098754	0.95957433
Phase-1 RCT-127	1.5925514	1.3429972	1.0306057	0.9533249	1.00876	0.7178115	0.9250566	1.172045	0.8827394	0.7391627	0.98924385	0.71098754	0.95957433	0.95957433
Macrophage inflammatory protein-1 alpha	1.0190309	1.0054972	1.1693976	1.3769805	1.1824238	1.634683	1.544362	0.80255795	1.2023994	0.8827394	0.7391627	0.98924385	0.71098754	0.95957433
Zinc finger protein	1.1724973	0.9193307	0.8431788	0.8962018	0.9058603	0.89388758	0.935967	0.9490376	1.3883634	1.4688945	1.0178479	1.6033671	0.9456027	0.8800001
Phase-1 RCT-73	1.1223653	1.1442189	1.0912493	1.0236672	0.9782122	1.0063344	1.051329	1.3883634	1.4688945	1.0178479	1.6033671	0.9456027	0.8800001	0.8800001
Glutamine synthetase	2.1333423	1.820132	1.0165076	1.060791	1.0450763	0.87335359	0.8584326	1.076011	0.7169876	1.2457002	0.8208224	0.88557715	0.6592019	0.80765357
Ca2+-binding protein	1.2687559	1.3409914	0.92511743	0.85408846	0.9724679	0.88638843	0.842947	1.049053	0.82803866	1.0941325	1.3387782	1.3238322	1.202866	0.9185017
Phase-1 RCT-242	1.2087405	1.2238438	0.8706338	1.1412474	1.0450763	0.87335359	0.8584326	1.076011	0.7169876	1.2457002	0.8208224	0.88557715	0.6592019	0.80765357
Phase-1 RCT-50	1.0565881	1.1551828	0.89854285	1.1358961	1.0054073	0.8405158	0.77237046	0.8564592	0.7571666	0.9735369	1.0025735	0.8802101	0.98868495	0.94353005
Phase-1 RCT-1	1.4940594	1.328736	1.1254094	0.8172474	0.8695086	0.8405158	0.77237046	0.8564592	0.7571666	0.9735369	1.0025735	0.8802101	0.98868495	0.94353005
Integrin beta1	1.0563483	1.0452126	1.0250069	0.8408468	0.9847083	2.0316253	0.8742668	1.1434534	0.8664291	1.0419987	1.5085291	1.2988801	1.3528446	1.3528446
Insulin-like growth factor binding protein 5	1.1838737	1.2408333	1.0570716	1.0216776	1.196861	0.81341978	1.121657	0.81707438	0.8571282	1.2150049	1.0701352	1.085468	1.5220445	1.1859888
Phase-1 RCT-59	0.8319063	0.8766589	0.6955897	0.70240146	0.8381338	0.95091496	0.95091496	0.7886209	0.717892	0.6489394	0.5601555	0.8442436	0.77489905	0.9725808
Phase-1 RCT-76	1.2814943	0.8337864	1.178692	0.8758007	1.2925658	0.78949003	0.95091496	1.240332	0.603143	0.603143	0.603143	0.53769164	0.7656556	0.9094005
Ferritin H-chain	1.3416598	1.2259558	1.2004838	0.94974865	1.175556	0.7777002	0.9268376	1.1367549	0.95319846	0.8245013	0.6517824	0.5501722	0.78805903	1.0251862
Selenoprotein P	0.88232505	0.9627032	1.0303063	1.0401986	0.95176384	1.3777782	1.2467723	0.8299917	0.7846725	0.86489138	0.5458298	0.8415313	1.0689006	0.97765984
PEN1/IMAC1	0.7885088	0.901497	1.1836127	0.84537196	1.0078163	1.1546927	1.170553	1.2488215	1.1651486	1.0544091	1.0544091	0.890194	0.8739606	0.88118175
Phase-1 RCT-214	0.8202754	1.0320655	0.7826187	1.0188853	0.87510467	1.0233942	0.9816874	0.9693384	0.7428868	0.7428868	0.7428868	1.0544091	0.8739606	0.88118175
Phase-1 RCT-112	1.0628692	0.8208955	1.210347	1.5065053	1.3481771	0.951673	1.367701	0.97175085	1.0342975	0.9720075	0.9720075	1.0544091	0.8739606	0.88118175
Thymidylate synthase	2.1276332	1.414781	1.151404	1.181685	0.7461773	1.0808395	0.9668248	0.604439	0.58628297	0.58628297	0.58628297	1.0544091	0.8739606	0.88118175
Phase-1 RCT-3	0.7465524	0.8565524	0.8479468	1.1386335	1.316165	0.7461773	1.0808395	0.9668248	0.604439	0.58628297	0.58628297	1.0544091	0.8739606	0.88118175
Nucleosome assembly protein	0.7810703	0.8111544	1.1228935	1.9491255	1.092882	2.050553	1.250733	0.9713336	0.53130513	1.4202547	1.7776887	0.628024	0.8326825	1.1288013
Cholesterol 7 alpha-hydroxylase (p450 VII)	1.1781115	1.3751685	0.8571286	1.2531203	0.853384	1.397017	0.9297886	1.0548142	0.908833	1.3544297	1.5106878	1.2033975	1.4504613	1.003312
Vesicular monoamine transporter (VMAT)	0.92570436	1.114417	0.7407818	1.1083028	0.8910274	1.1860604	0.9424736	0.7339526	0.7945753	1.089718	0.9591414	0.9456884	1.0428423	0.9673735

Table 2B

Phase-1 RCT-32	1.196745	1.2395159	1.1968712	1.0323776	1.0010873	1.0014746	1.6703871	0.978622	1.0075728	0.9455246	0.9213234	1.3031216	0.9802014	1.1776532
Pericardial assembly factor 1	1.19720934	1.284778	1.2760943	1.159461	1.007668	1.3870784	1.1424256	1.054521	1.5019662	1.377651	1.6051254	1.6044257	1.0855915	1.0473786
Exonuclease DNA glycosylase	0.95274734	0.9175338	1.1316018	1.1515138	1.0451355	1.5996459	1.1496229	0.9070449	0.9070449	0.9070449	0.9070449	0.9070449	0.9070449	0.9070449
Phase-1 RCT-62	0.894482	0.9690084	0.9047871	1.1050945	1.0659538	0.9767866	1.525624	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145
Midline 1/3	0.65920365	0.70019627	0.9066759	1.0014963	1.0659538	0.9767866	1.525624	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145	0.9420145
Phase-1 RCT-184	0.9511713	1.0691445	0.9860201	0.73948437	0.7434331	0.7623835	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652
Phase-1 RCT-168	0.6943256	0.6575436	0.8280131	0.8303652	0.8280131	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652	0.8303652
Phase-1 RCT-119	0.8939337	0.9544903	0.9205625	0.9246043	0.9386873	0.7203366	0.8131916	0.8131916	0.8131916	0.8131916	0.8131916	0.8131916	0.8131916	0.8131916
Carbonic anhydrase II	0.70180655	0.5225439	1.059198	1.0770324	1.065626	1.0011478	1.2095635	1.1462882	1.1462882	1.1462882	1.1462882	1.1462882	1.1462882	1.1462882
Tryptophan hydroxylase	0.95778905	0.8657565	1.0203127	0.9357161	0.8658578	0.6824432	0.8118462	0.8118462	0.8118462	0.8118462	0.8118462	0.8118462	0.8118462	0.8118462
Phase-1 RCT-171	1.2201654	1.4817768	0.9674284	1.0925914	0.966333	1.262195	1.0716653	1.1628338	1.1628338	1.1628338	1.1628338	1.1628338	1.1628338	1.1628338
Phase-1 RCT-179	1.7780123	1.8041758	1.2418946	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681	1.033681
Phase-1 RCT-207	0.9434246	0.57476045	0.7021921	0.9608116	0.9585532	1.2168718	1.3824445	0.8511919	0.8511919	0.8511919	0.8511919	0.8511919	0.8511919	0.8511919
Phase-1 RCT-144	1.1673335	1.4617443	1.0074372	1.0251063	0.9703286	1.3141669	0.9406189	0.9406189	0.9406189	0.9406189	0.9406189	0.9406189	0.9406189	0.9406189
Phase-1 RCT-225	0.80920464	0.8623826	1.2118	0.83400285	0.82049024	0.877703	0.7195414	0.7195414	0.7195414	0.7195414	0.7195414	0.7195414	0.7195414	0.7195414
Cytochrome P450 2E1	0.9480705	0.7624569	1.0371982	0.90428233	1.0464301	0.9438023	1.047221	0.868287	0.868287	0.868287	0.868287	0.868287	0.868287	0.868287
Ep-1	1.7812493	1.1784388	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014	0.9860014
Thioredoxin-1 (Trx1)	0.44719073	0.3804785	0.6718244	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495	1.1798495
Carbonic anhydrase II	1.0263013	1.0328846	0.9440629	0.9155214	1.0717598	0.8524432	0.8518231	0.8518231	0.8518231	0.8518231	0.8518231	0.8518231	0.8518231	0.8518231
Phase-1 RCT-140	1.5948885	1.3121742	1.215177	1.2310473	0.93348614	1.1316848	0.7711036	0.7711036	0.7711036	0.7711036	0.7711036	0.7711036	0.7711036	0.7711036
Complement component C3	0.516179	0.5006628	0.8115569	0.7652976	0.9403308	1.040487	1.0065287	1.0065287	1.0065287	1.0065287	1.0065287	1.0065287	1.0065287	1.0065287
Glucokinase	0.84384745	0.8197312	0.923914	0.89724284	0.9433016	1.0509192	1.3744236	1.0052317	1.0052317	1.0052317	1.0052317	1.0052317	1.0052317	1.0052317
3-methyladenine DNA glycosylase	0.93746494	0.9851828	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478	0.905478
Pericardial assembly factor 1	1.4941648	1.2578622	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503	0.960503
Phase-1 RCT-40	1.0697123	0.9916258	1.020598	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277	0.9731277
Senescence marker protein-30	1.0624695	1.1177529	1.033622	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745	0.91367745
Cyclin G	1.5386845	1.7349887	1.2107111	1.1496931	1.2357011	1.2510348	1.1227731	0.9279324	0.9279324	0.9279324	0.9279324	0.9279324	0.9279324	0.9279324
Melanoma-associated antigen ME491	1.064708	1.1231495	1.1226124	0.9491755	1.0689228	1.242078	1.0089228	1.0089228	1.0089228	1.0089228	1.0089228	1.0089228	1.0089228	1.0089228
Phase-1 RCT-28	1.1315912	1.0745033	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015	1.0360015
Enkephalin	0.54086673	0.7162263	0.84829146	0.9361338	0.8048772	0.762009	1.3729218	0.9238171	0.9238171	0.9238171	0.9238171	0.9238171	0.9238171	0.9238171
Alcohol dehydrogenase 1	0.95012387	0.9443725	0.98259085	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604	1.0076604
Stom cell factor	0.74436325	0.7276355	1.0379341	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181	1.1444181
Protein tyrosine phosphatase alpha	0.9204006	1.0529279	1.0659155	1.4696	0.7170563	1.4322449	0.8557473	1.092292	1.092292	1.092292	1.092292	1.092292	1.092292	1.092292
Phase-1 RCT-55	1.9207493	1.965763	1.0374839	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762	0.9973762
Urokinase	1.3063649	1.2447972	1.2058957	1.2204465	0.9284392	0.9690556	0.8285705	0.8285705	0.8285705	0.8285705	0.8285705	0.8285705	0.8285705	0.8285705
Phase-1 RCT-280	1.3969881	1.1530787	1.5498131	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647
Superoxide dismutase Mn	0.8741348	1.2753718	1.5498131	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647
Beta-tubulin, class I	1.1323972	1.456889	1.6997817	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647	0.6938647
Carbamyl phosphate synthetase I	1.1237343	1.046247	1.2075438	1.2100044	1.043465	1.4097192	0.8563134	0.8563134	0.8563134	0.8563134	0.8563134	0.8563134	0.8563134	0.8563134
Diacylglycerol kinase zeta	4.2165384	3.3571503	1.013535	1.2968721	1.101331	1.1835005	1.0521425	1.0521425	1.0521425	1.0521425	1.0521425	1.0521425	1.0521425	1.0521425
Phase-1 RCT-141	1.2689055	1.3241378	1.0077041	0.7769268	0.9673083	1.211059	0.821425	0.821425	0.821425	0.821425	0.821425	0.821425	0.821425	0.821425
14-3-3 zeta	0.89105764	0.90415615	1.4205028	0.977382	0.9660434	1.1315813	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948
Gammaglutaminyl carboxylase	1.3350573	1.3795122	1.4205028	0.977382	0.9660434	1.1315813	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948
Glucocorticoid protein L13A	0.86105764	0.90415615	1.4205028	0.977382	0.9660434	1.1315813	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948
IL-6	0.86105764	0.90415615	1.4205028	0.977382	0.9660434	1.1315813	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948	0.9181948
Phase-1 RCT-65	0.831391	0.8622765	1.1030993	1.0034012	0.9775243	1.068473	0.8676533	0.8676533	0.8676533	0.8676533	0.8676533	0.8676533	0.8676533	0.8676533
C-Jun	1.3616754	1.4918815	1.171592	0.7665975	1.059657	0.98909175	0.98909175	0.98909175	0.98909175	0.98909175	0.98909175	0.98909175	0.98909175	0.98909175
Protein O-mannosyltransferase 1 (Pomt1)	0.7220453	0.7800428	0.8704733	1.0206734	1.007373	1.1613763	0.9405884	0.9405884	0.9405884	0.9405884	0.9405884	0.9405884	0.9405884	0.9405884
HMG CoA reductase	1.2324196	1.378854	1.3395527	0.7738172	0.8205881	1.0205413	0.8123623	1.0030811	1.0030811	1.0030811	1.0030811	1.0030811	1.0030811	1.0030811
Interferon related developmental regulator (IFR1)	1.9384251	1.8405148	0.96724355	1.1390474	0.93359494	1.0385746	0.93359304	0.93359304	0.93359304	0.93359304	0.93359304	0.93359304	0.93359304	0.93359304
PCNA	2.187407	1.844182	2.148626	1.552045	1.2116808	1.2786454	1.4573317	1.3310851	1.3310851	1.3310851	1.3310851	1.3310851	1.3310851	1.3310851
Glucose-regulated protein 78	1.1828561	1.0888662	1.311928	1.0119721	0.9962705	1.2311638	0.95947673	0.95947673	0.95947673	0.95947673	0.95947673	0.95947673	0.95947673	0.95947673
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	1.0224678	0.9511649	1.0575618	1.1463871	0.9957145	1.061658	1.061658	1.061658	1.061658	1.061658	1.061658	1.061658	1.061658	1.061658
Caspase 6	0.80715465	1.3461344	0.8636875	0.9521146	0.8008857	0.9708975	1.01172	0.68804525	1.01172	0.68804525	1.01172	0.68804525	1.01172	0.68804525
Phase-1 RCT-169	1.1314183	1.3803396	0.91325414	1.0375327	0.9879597	0.9039767	1.0773031	0.8612808	0.8612808	0.8612808	0.8612808	0.8612808	0.8612808	0.8612808
Phase-1 RCT-197	0.71948994	0.8659429	1.0692991	0.9373187	1.0821942	0.9877577	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942
Phase-1 RCT-34	0.71948994	0.8659429	1.0692991	0.9373187	1.0821942	0.9877577	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942	0.9335942

Phase-1 RCT-72	0.88178915	1.1665903	0.9298665	1.0890157	0.82763726	1.2357893	1.0064553	1.0053513	0.92089885	1.0220335	1.021149	0.980335	1.4632838	0.9735293
Proteinase 1	0.1046596	1.0607217	1.1897564	0.9193406	1.0469567	0.90268217	0.9473726	1.3548011	1.3501081	1.3501081	1.3501081	1.3501081	0.9847645	1.2129198
Phase-1 RCT-280	0.6221221	0.5853383	1.1897564	0.9193406	1.0469567	0.90268217	0.9473726	1.3548011	1.3501081	1.3501081	1.3501081	1.3501081	0.9847645	1.2129198
Phase-1 RCT-90	0.8783744	1.0004029	0.9298665	1.0890157	0.82763726	1.2357893	1.0064553	1.0053513	0.92089885	1.0220335	1.021149	0.980335	1.4632838	0.9735293
Oxidoreductase P450 2C39 (alternative clone 2)	1.2475604	0.9900629	1.6218866	1.1976819	0.8785656	0.9473726	1.3548011	1.3501081	1.3501081	1.3501081	1.3501081	1.3501081	0.9847645	1.2129198
Phase-1 RCT-200	1.2836824	1.0978901	0.9790357	0.7439342	0.9372669	0.8817108	0.8438114	0.9530376	0.8083476	1.2540697	1.561087	1.133401	1.0670385	1.1337425
Phase-1 RCT-261	1.4311291	1.3009963	0.8187124	0.9171408	0.7272325	0.8514934	0.9854956	1.0933633	1.0741166	0.8799033	0.7411657	0.8449277	0.8449277	0.8449277
Aldehyde dehydrogenase alpha	1.7391283	1.3776491	1.0840161	0.9453175	1.0684575	0.6905023	0.9824817	0.9650069	0.9650069	0.9650069	0.9650069	0.9650069	0.9650069	0.9650069
Aldehyde dehydrogenase beta	0.95348375	0.1723446	1.0020881	1.1288853	0.9643303	0.81272817	0.374305	1.0933931	0.6116194	0.7127904	0.73617285	0.8488911	1.0014313	1.1865543
Chromatin P450 1A2	0.9321806	0.8722348	1.0020881	1.1288853	0.9643303	0.81272817	0.374305	1.0933931	0.6116194	0.7127904	0.73617285	0.8488911	1.0014313	1.1865543
Phase-1 RCT-267	0.9501931	0.800772	1.0020881	1.1288853	0.9643303	0.81272817	0.374305	1.0933931	0.6116194	0.7127904	0.73617285	0.8488911	1.0014313	1.1865543
Microsomal oxidase B	0.9857755	0.8160046	1.1375813	0.9869216	1.2335562	0.8691234	0.9567767	1.0178178	0.7495904	0.9020337	1.1730187	0.9731368	1.0178178	1.0178178
Phase-1 RCT-264	0.72406314	0.7021566	0.9314804	0.8180205	0.94064025	0.9653854	0.9020337	0.9973767	0.7495904	0.9020337	1.1730187	0.9731368	1.0178178	1.0178178
Perforinase proliferator activated receptor gamma	1.2275011	1.1832994	0.9745297	0.83909474	0.8942457	0.9722127	1.0225522	1.032423	0.9858027	1.0028224	0.7556607	1.135286	1.031333	1.031333
Phase-1 RCT-143	0.69286764	0.9529679	0.9722127	1.0225522	1.032423	0.9858027	1.0028224	0.7556607	1.135286	1.031333	1.031333	1.031333	1.031333	1.031333
Phase-1 RCT-251	0.9356491	0.8910481	1.2408325	1.1461583	0.9722127	1.0225522	1.032423	0.9858027	1.0028224	0.7556607	1.135286	1.031333	1.031333	1.031333
Phase-1 RCT-117	0.7341485	0.76357818	0.9120766	0.7207394	1.0934965	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308
Glutathione S-transferase theta-1	1.17539	1.1664082	1.1694742	0.9815319	1.0497767	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308	1.040308
Phase-1 RCT-81	0.7797078	0.7759406	0.90472	0.8901826	0.8478767	0.831878	0.97765497	0.89127904	1.01414	0.8803078	0.9288028	0.9288028	0.9288028	0.9288028
Phase-1 RCT-148	1.0991625	1.0400456	1.1459318	0.8035536	0.9656273	0.81829187	0.9738154	1.2601598	0.71797585	0.6400803	0.57644395	0.5981607	0.92873343	1.018348
Phase-1 RCT-142	0.8943711	0.9053154	0.8059455	1.11857	1.3152018	1.4922833	0.87048685	1.337465	1.3113568	1.1069573	1.3744705	1.1197052	1.282045	1.282045
Actin receptor type II	1.3384139	0.8915835	0.8944831	0.53447355	0.8732226	0.6739791	0.7696514	0.71087736	1.3035159	1.1374246	0.87716459	1.0873463	1.0437266	1.302465
Glycine methyltransferase	0.7601332	0.8225864	1.0815569	0.8561805	0.67185815	0.64334357	0.8112071	0.9446306	0.9744575	0.8205568	0.6798019	0.92232476	0.77587164	1.0885769
Phase-1 RCT-281	1.0577998	1.1023385	1.3077286	1.2042325	0.97768074	1.2746613	1.032423	0.9858027	1.0028224	0.7556607	1.135286	1.031333	1.031333	1.031333
Ciliary neurotrophic factor	0.6204586	0.6167365	0.8903374	0.5934103	0.7667095	0.6117091	0.7428419	0.8024494	0.9821014	0.6392431	0.5786373	0.7953983	0.5850324	1.0576885
Gap junction membrane channel protein beta 1 (Gp1)	1.010259	1.0829846	0.8237366	0.9378815	1.0146397	1.0949527	1.3395852	0.9318785	0.6369056	0.7126934	0.8410026	0.8392332	1.0805261	0.9790688
Phase-1 RCT-26	1.137278	1.1347337	0.9345478	0.8113872	0.8973574	0.9308653	0.9308653	0.9308653	0.9308653	0.9308653	0.9308653	0.9308653	0.9308653	0.9308653
Phase-1 RCT-287	1.2632732	1.0953358	0.9483587	0.82969726	1.0527381	0.77182416	0.9072407	1.42074	0.8130544	0.59537047	0.4597145	0.7407809	1.0712252	1.0712252
Retinol-binding protein (RBP)	1.0326757	0.8355306	0.8861569	0.8195454	0.87214945	0.5318157	0.7560703	0.8970634	0.72816408	0.6251846	0.48287407	0.6660737	1.2655912	1.2655912
Very long-chain acyl-CoA synthetase	0.88978854	0.7960054	0.9295668	0.85522667	0.939126	0.7163147	0.9568707	0.8658707	1.0248118	0.9331822	0.73100406	0.58029655	0.8840012	0.9119618
Syndecan-1	1.057565	1.0194391	0.9971336	1.1034007	1.0333687	1.140017	1.2776341	1.1505331	1.172678	0.9353871	0.6080302	1.076561	1.0019537	1.0471478
Shalmin	1.5621687	1.8997797	1.1072233	1.1019106	1.0035381	1.111526	1.2714924	1.2150088	1.126088	1.0237121	0.191782	1.183206	1.087161	1.0070526
Phase-1 RCT-145	0.80256806	0.83918387	0.9537692	0.85635484	0.980877	1.069099	0.90918216	0.8674874	1.0870154	0.9655108	0.6854965	0.782356	1.0870154	0.8888164
Actin	0.80155337	0.8000788	0.92291	0.99635154	0.85422924	0.82218167	0.90918216	0.8674874	1.0870154	0.9655108	0.6854965	0.782356	1.0870154	0.8888164
Phase-1 RCT-89	1.0287625	1.1406034	0.93463403	1.2284557	1.186705	1.235527	1.201415	0.9436598	0.4513307	0.8402729	0.8615394	0.7161505	1.1869501	1.0210365
Sarcoplasmic reticulum calcium ATPase	1.4572407	1.5766407	1.1387395	1.2705306	1.2446899	1.0256899	1.1155715	1.0054308	0.96776205	1.4350277	1.1852075	1.1852075	1.0618163	1.0618163
Phase-1 RCT-204	1.2374928	1.2162437	0.9422561	1.0262543	0.9891626	1.0815848	0.9683682	1.0224518	1.1951008	1.0011208	1.1851948	1.255968	0.9708163	1.0618163
Vascular endothelial growth factor	1.0931413	1.0874077	1.0679588	0.8514126	1.0134132	0.9867549	0.9094096	0.82311404	1.2621864	0.87181834	0.8210026	1.3802773	0.7632868	1.0320044
NADP-dependent isocitrate dehydrogenase, cytosolic	0.6837992	0.7140889	1.1624864	0.821252	0.9701836	0.88232315	0.91855097	1.3065232	0.84224707	0.7923732	0.5453488	0.559419	0.9058299	0.7484161
DNA binding protein inhibitor ID2	0.3289424	1.395378	1.065817	0.69787624	0.83381546	0.7641444	1.4522625	0.6620855	0.9042151	1.22532	1.2031228	0.9836835	0.99873927	0.99873927
Glutathione S-transferase Ya	0.54694816	0.54214567	1.0527972	0.9580031	1.7558915	1.1701275	1.1678929	1.7517805	0.6517636	0.8923016	0.84026757	0.3325826	0.7282335	0.7282335
Epoxide hydrolase	0.8207506	0.8076536	0.85258787	1.0191725	1.0286249	1.3390343	1.3738457	1.1441139	0.3526732	0.4803606	0.381308	0.8060351	1.1555454	0.5938624
Insulin-like growth factor I	0.964218	1.0492364	1.0274685	0.8737183	1.0596892	0.6525816	0.82933874	1.0361573	0.73850069	0.6349834	0.5732747	0.5214069	0.5493498	0.85405374
Proteinase H synthase	1.5277659	1.2288599	0.909794	0.7503524	0.8203346	0.81785096	0.671668	0.9664428	1.2364347	1.8438284	1.2646616	2.0416243	1.1197401	1.3643137
Phase-1 RCT-136	0.8764354	0.910557	0.82314585	0.81730694	0.8773692	0.73354035	0.977668	0.8539264	1.005383	0.9449812	0.741135	0.76882083	0.9436598	1.07318
Phase-1 RCT-137	1.0704565	0.901865	1.1897423	0.9720935	1.0694132	0.8355362	0.86543543	1.569728	0.6653369	0.66002226	0.502182	0.4608024	0.8053075	0.8053075
Phase-1 RCT-138	1.0900164	0.8092407	1.0653477	0.98737114	0.8953281	0.8666572	0.8638112	1.0505403	1.1300089	1.1008559	1.0218905	0.95084395	0.891894	1.0551518
Hepatic lipase	0.8181079	0.7596442	1.0055487	0.9143451	0.8166709	0.80543876	1.12188	1.0122585	0.58254816	0.5355666	0.28474824	0.3786332	0.8716383	0.7702378
Phase-1 RCT-164	0.913428	0.8698959	1.0918155	0.9815035	1.1897848	0.8869967	0.8869967	1.1890251	1.1390353	0.75762016	0.7235252	0.72458196	1.3793544	0.8992821
Acyl-CoA dehydrogenase, medium chain	1.1745592	0.8712633	1.0047151	0.8683088	1.002133	0.694545	0.90325713	1.9169461	3.3820217	2.582865	1.5666019	1.3793544	0.8992821	0.8992821
Glutathione S-transferase Yb2 subunit	0.9156717	0.8514545	0.8714922	0.9688308	1.002133	0.694545	0.90325713	1.9169461	3.3820217	2.582865	1.5666019	1.3793544	0.8992821	0.8992821
Carbonic dehydratase	1.4057711	1.0588887	0.96207545	0.8388908	1.0367545	0.7314058	1.180671	1.0039303	0.69117206	1.0427238	1.074133	1.7329285	1.3055872	1.1480017
Phase-1 RCT-166	0.9149828	0.8553626	0.71840024	0.8278226	0.8042803	0.41614106	0.734356	0.6873147	0.36605516	0.3340742	0.20583014	0.31582183	0.74186047	0.9941813
Apolipoprotein E	0.7007168	1.0056233	0.8422523	1.063907	0.8916108	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394
UDP-glucuronosyltransferase	0.6764033	0.61648035	0.8726511	1.063907	0.8916108	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394	0.7019394
Glutathione S-transferase P1	1.9445119	1.585002	1.7532765	0.9531934	1.1559697	0.9027935	1.0742802	1.0148937	0.68722155	0.8170202	0.5331357	0.85817646	1.1390509	0.8804725
Disulfide isomerase related protein (ERp72)	0.9840046	0.8562255	1.1953163	0.99453866	1.2767175	0.76501	0.9774105	0.9708285	1.1655743	1.1092968	1.1816414	0.307026	0.87654457	1.182592
Ribosomal protein L13	2.2899333	1												

Phase-1 RCT-3	1.0593649	0.9661597	1.0112026	1.2452461	1.7352777	1.35198	1.6767813	1.0070753	1.0374677	1.2715274	1.3533464	1.2459257	1.2016058	0.9437133
Hydroxymethylglutaryl dehydrogenase	1.5851765	1.2710481	0.8573307	0.9505356	0.960382	0.7433274	1.0439999	1.1043209	0.863156	1.182325	1.043398	0.8614231	0.8005762	1.1743588
Carbonic anhydrase II, sequence 2	1.1994862	0.84763	0.9662399	0.9424029	1.2673054	0.82607	0.9775837	0.9859206	0.7106547	0.8790113	0.7455098	0.6810019	0.7078803	1.0294114
Phase-1 RCT-10	1.0403582	0.8112687	0.8623088	0.8266042	0.7523625	0.8558734	0.9771589	0.9813491	0.7073537	0.4417522	0.3769426	0.38515514	0.5622464	1.2633113
Alpha-2-macroglobulin	1.1972188	1.2739882	0.5971435	1.0523368	0.82497585	0.8203933	0.8504236	0.9236663	0.9341171	0.8923165	0.5958331	0.71885105	0.9253141	1.055409
Dynamin-1 (D100)	0.8272833	0.86897036	0.82745984	1.0669426	1.1445642	1.3621626	1.1000794	0.9851037	1.2547137	2.2227194	0.7337825	0.68278358	0.8176041	0.9430137
Lysyl oxidase	1.0294024	0.8897882	0.89572876	0.8383211	0.92833211	0.7198882	0.8443149	1.3402421	0.7801331	1.3492284	2.3246862	0.7794176	1.3124469	1.0844060
Phase-1 RCT-252	1.2439842	1.218335	0.6542097	1.2256021	1.0647502	1.3553208	0.86384168	0.9716817	1.3383244	1.8579334	1.5353653	1.9319481	0.9953036	1.0572442
Phase-1 RCT-278	0.8761552	0.9546997	0.89503516	0.8666662	0.8218614	0.8418851	0.9458882	0.86384136	0.89674336	1.1477011	0.94639176	0.8077977	1.312271	1.20488
Phase-1 RCT-42	1.0442463	1.0155623	1.2068967	0.91800475	1.0633038	1.0803107	0.90016374	0.9914284	1.392701	1.2751751	1.3843559	1.0218859	1.0219755	0.9659065
Cytochrome P450 2C11	0.8568082	0.94225067	0.9048261	0.7995366	1.1426861	1.1761021	1.1536902	1.0523443	0.620405	2.2385189	2.453394	1.6298872	2.1410809	0.9434661
Concomitant factor 1 (CF1)	1.5664335	1.3146268	0.8525598	0.8802399	0.9608334	0.78245884	0.7930566	1.1876551	2.989147	1.0948825	0.78239024	0.7868651	0.9817603	0.9919547
Proliferating cell nuclear antigen gene	0.75772305	0.8173718	1.1574932	1.3910277	1.0803767	1.4032357	1.1780933	1.075155	0.6145289	0.7182985	1.4706178	1.2230747	0.9676083	1.1472884
Activating transcription factor 3	1.1322945	1.2897657	0.8946906	1.2716356	0.9947648	1.6139595	1.055058	0.9042885	0.80719115	0.72888297	1.0058913	0.804579	1.0249529	0.9327185
Focal adhesion kinase (p125FAK)	0.756839	0.7038889	1.0019181	0.9416854	1.1400955	0.8863957	1.0105634	0.9478263	1.0228851	0.81301244	1.1157645	1.2180538	1.1445923	0.953004
Phase-1 RCT-283	1.1049412	1.0766385	1.1467079	1.057811	1.3176111	0.9459308	0.9478263	1.0105634	0.8111385	0.7432988	0.8055978	0.8437884	0.8946889	0.9616881
Iron-responsive element-binding protein	0.86535685	0.866385	0.97616397	0.9634391	0.9086726	0.9341191	0.9459308	0.9478263	1.0105634	0.8111385	0.7432988	0.8055978	0.8437884	0.8946889
MHC class II antigen RT1.A10 alpha-chain	0.89959994	1.0471803	1.2595324	0.85189277	1.1166318	1.0844019	1.0027851	1.0012359	2.8169622	2.57511	2.2506177	2.8980742	0.9573593	1.4316881
Avi sulfotransferase	0.8458443	0.63187784	1.0547144	0.88929076	1.4211384	0.87344634	0.9550162	1.253554	0.47545376	0.6655176	0.57084644	0.4930193	1.3112469	1.0404302
Phase-1 RCT-171	0.8535268	0.8574052	0.89356525	0.9525503	1.0004385	1.0679675	0.9676389	0.9390745	0.8747185	0.7894876	0.74598083	0.65933573	1.7087405	0.7894076
Phase-1 RCT-43	0.6475213	0.5758235	0.8027597	0.861032	0.82503766	0.8976289	0.9390745	0.8747185	0.7894876	0.74598083	0.65933573	1.7087405	0.7894076	0.7894076
Phase-1 RCT-270	1.1151518	0.8910963	1.0847219	0.75017244	0.81351894	0.7541199	0.7960042	0.97547185	0.7590206	0.84470594	0.79326205	0.7871759	0.8946786	0.9431378
Colony-stimulating factor-1	0.9745287	0.9403939	0.9284653	0.973638	0.9356111	1.0033409	1.0267475	0.85086524	1.4603191	1.0258751	0.79036725	0.8648141	0.9897034	0.9768861
Neutrophin	0.8050827	0.837015	0.9161477	0.92084928	0.9786513	1.0543019	0.8257178	0.55591576	1.0005417	0.7761086	0.693507	0.935148	0.9301151	0.9076993
Phase-1 RCT-62	1.0413553	0.96880327	0.9556805	0.8448888	0.9608334	0.9122591	1.3181725	0.92191637	0.602768	0.84891884	0.80336207	0.7817355	0.8913258	1.0076993
Phase-1 RCT-22	0.8543659	1.0331197	0.9363478	1.0832655	0.9140487	1.4297458	0.97471657	1.1775674	1.092823	1.1519599	0.87232355	0.8356588	1.2876028	0.9700898
Phase-1 RCT-18	0.874048	0.8343197	0.8830835	0.9534596	0.847479	1.218851	0.8452253	0.9863269	1.070958	1.1367725	1.0888714	1.0032573	0.6589115	0.9089066
Phase-1 RCT-123	0.9510543	0.9392809	1.009741	1.156317	0.3588036	1.394205	1.0315821	0.950323	1.076341	1.018885	1.0781587	1.0540534	0.950542	1.0327765
Phase-1 RCT-95	0.78872144	0.8824857	1.0622949	0.9787973	0.9854523	0.98165055	0.5318628	0.9350119	1.225472	0.65953136	0.69773273	0.7731424	1.0763944	0.7085625
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.77237916	0.8403692	0.83358806	0.8682777	1.0457022	0.9408263	0.9825619	1.0174794	0.8437007	0.72326124	0.6367833	0.5628996	0.7594714	0.9009729
Glucose transporter 2	0.4711357	0.6573101	0.7363769	0.8057536	1.1470666	1.0387386	1.4087683	0.8813788	0.40221727	0.6275077	0.43715245	0.42941276	1.0251453	0.8544285
Multidrug resistant protein-2	1.0750359	0.88521606	1.1482161	0.968246	0.8338189	1.1168138	0.8537698	1.0385768	1.329669	0.5731478	1.4213088	1.2498853	1.2224085	1.1340177
Multidrug resistant protein-1	1.1507381	0.9227903	1.1842461	0.9245305	1.1908151	0.9782461	0.99287774	1.0271351	1.2488108	1.2045332	1.4895597	1.684771	1.1882141	1.2700638
Phosphatidylethanolamine-binding protein	1.0476757	0.83773425	1.0022966	0.76253706	1.0452124	0.8190576	0.7819124	1.0901374	2.187722	1.8687284	1.4841086	1.9989529	0.8254946	1.1217185
Phase-1 RCT-180	1.3622051	1.5013901	1.3129156	0.82165796	0.9332657	0.805386	1.1234822	1.2689714	1.4173905	1.2375016	1.0703648	1.304235	0.9339842	1.10835
Integrin beta-4	0.9201862	1.1072718	1.0399152	1.136572	1.1189326	1.3810774	1.215165	0.94474	1.3669705	1.1518555	1.1766307	1.8484511	1.2276307	1.3987131
NADPH Glycochrome P450 oxidoreductase	1.1326761	1.1773452	1.2061988	0.836478	1.3172449	1.0284907	1.120316	1.0129187	0.87584815	0.9572072	1.0619187	1.4739163	1.0173372	1.249256
Waf1	0.93418497	0.5159486	1.089216	1.237478	1.167846	1.4148682	1.1274317	1.0127522	1.1274079	1.3824594	1.2666234	1.4710459	1.3404733	1.0534282
Endogenous retroviral sequence, 5' and 3' LTR	0.7817924	0.84917035	0.853574	0.8588678	0.8615574	0.73587986	0.9110492	0.8012223	1.3282588	1.0151435	1.3491335	1.056047	0.9304617	0.9923947
Phase-1 RCT-53	0.8791944	0.9723885	0.8700865	0.9046627	0.81124294	0.8488771	0.80192155	0.90542	1.139748	0.9788373	0.87285355	0.9629169	0.7433369	0.9772727
Phase-1 RCT-240	1.0022859	1.168404	0.8501437	1.121586	1.0226296	1.0783556	1.0804016	1.1100079	0.782454	0.8531763	0.8744884	0.9391753	0.9718787	1.0015116
Osteopontin	0.7284687	0.8624088	0.7895359	0.7089431	0.6980819	0.8545354	0.8677505	0.7742456	0.8369045	0.8208645	0.70708815	0.91200894	0.9803258	1.0015116
Organic anion transporting polypeptide 1	1.2716007	1.2826391	0.8995594	0.8438305	0.857187	0.7977735	0.9492723	1.0647812	0.5622367	0.6712222	0.6113816	0.69462334	0.9251131	0.9702281
Phase-1 RCT-241	1.0637344	0.73544717	1.0518008	0.8141374	0.9478964	0.8446813	0.8282783	0.8761312	1.8395806	1.3708087	1.4044435	1.5235452	0.9304928	1.2064226
Tissue factor pathway inhibitor	2.9595387	1.6986893	0.9018065	0.8520121	0.83744735	1.1004021	1.1734132	1.0707952	0.8733637	1.2310316	1.1482221	1.0790707	1.2664462	0.98121884
Cyclin-dependent kinase 4 inhibitor P27kip1 (alternate)	1.1412823	1.2568863	1.1440927	1.3358175	1.0536232	1.4430473	0.98732866	1.0745574	0.8940567	1.0335273	1.2048847	1.1267672	1.3335998	1.018478
Phospholipase D	0.9762216	1.2388972	0.8941625	0.8650468	0.8853863	1.1053408	0.9001264	0.9188004	0.80942774	0.8496295	0.65785426	0.9802751	0.76742887	1.027399
Phase-1 RCT-39	0.74805087	1.0127788	0.6723017	0.9309649	0.7612035	1.028347	0.8469374	1.0027355	0.7023725	1.1281704	1.3704784	1.2781637	1.4273684	0.9617856
Phase-1 RCT-259	1.4104052	1.6631589	0.9088275	1.0612801	0.89150447	1.1721127	0.9222047	0.9076824	0.7930947	0.8294051	0.80070746	0.95829403	1.0039216	1.1875331
Phase-1 RCT-113	1.3574561	0.92581564	0.9154985	0.97373784	0.9258685	1.1611727	0.8330526	0.8681814	0.87311447	0.80019464	0.88899903	0.88999903	0.963481	1.0303532
Adenine nucleotide translocase 1	1.2403374	1.2264336	0.8538825	0.8360768	0.7663776	0.8603895	0.9671057	1.333568	1.2222222	1.155488	0.70708815	0.91200894	0.9803258	1.0015116
Alpha-1 acid glycoprotein	0.75235015	0.8221742	0.8013557	0.735608	0.8613175	1.0028433	0.81757363	0.9285887	0.5808717	0.80751947	0.48880232	0.6168826	1.1014684	0.9657176
MHC class II antigen RT1.B-1 beta-chain	10.337865	6.260809	1.353883	1.3469131	1.8282185	0.93160146	1.1458888	2.088122	0.4730836	0.6911556	0.690232	0.6546916	1.8027414	0.9020589
	1.0653468	0.8449537	0.7346804	0.9908348	0.9785439	1.0459534	1.4354682	0.4263586	1.0004483	0.8068557	0.95212035	1.4011122	1.3800057	1.73538

Table 28

Organic cation transporter 3	1.6449776	1.5639003	1.215203	1.0678376	1.2252864	1.0248191	1.0457604	1.0146531	0.7522243	0.7484944	0.65526175	0.7204255	0.9612114	1.0195625
Hypoxia-inducible factor 1alpha	0.92618085	0.9471209	0.9494580	1.0153334	1.0484185	1.4783347	1.4855693	0.9585123	0.4321122	0.4981185	0.3958768	0.61472034	1.1644042	0.90068214
Phase-1 RCT-43	0.7873355	0.8953971	0.8767253	0.7116405	0.753432	0.75225927	0.9284325	0.8993286	0.3464416	0.84112203	0.743819	0.850321	0.847617	1.0238228
Phase-1 RCT-45	1.0713814	1.0075121	0.9772049	0.9699454	0.9229164	1.0460426	1.0966804	1.0919505	1.350235	1.1253754	0.9931792	0.8347345	1.0165597	1.0480949
Malate dehydrogenase, cytosolic	1.3081509	1.0533417	1.3276078	0.834524	1.0170642	0.9282889	0.9186293	1.2205791	0.886228	0.7778348	0.7875187	0.8063424	0.9868834	0.9534571
VI30 element	1.0653848	1.156748	1.2927728	1.1230292	0.908573	0.7947702	0.77640843	0.7593895	0.54176644	0.47821628	0.8215711	0.7094655	0.9823841	0.94243455
Phase-1 RCT-189	0.7971703	0.78560543	1.0258222	1.02556	1.1857343	0.7955356	1.0442593	0.9421283	0.8012278	0.8099214	0.58556724	0.60709405	0.9847308	0.97812205
Alpha-fetoprotein	1.0624898	0.8613188	1.058339	1.0701015	0.9692206	1.2117461	1.1116756	1.0218014	0.7019988	0.73007715	1.1849555	0.7778402	0.90431744	0.8537254
Celgranulin B	1.0789524	0.75318074	1.008946	0.8988558	1.0373278	0.85482885	0.90309005	1.1327678	0.7689902	0.49353778	0.5540497	0.39688538	0.7865484	0.8135143
Tissue plasminogen activator	1.0755728	1.0627276	1.049704	0.9303126	0.9498396	1.0903188	0.9747801	1.0020086	0.91423327	1.0870353	1.2495572	0.8603407	0.943276	0.86872344
Phase-1 RCT-195	1.0666154	1.0742628	0.87930963	0.9097748	0.8063035	0.7287521	0.8315743	0.972567	0.5903656	0.7892408	0.84747356	0.8603407	0.943276	0.86872344
Liver fatty acid binding protein	1.0592388	1.1091268	1.2425375	1.4358682	1.762711	0.97501184	1.3888182	2.491495	0.5782221	0.48688347	0.37656292	0.3268912	0.70559523	0.7439354
Alpha-1 microglobulin/kinin precursor (Amp)	1.2681894	0.98574394	0.871092	0.7130717	0.8630704	0.97501184	1.3888182	2.491495	0.5782221	0.48688347	0.37656292	0.3268912	0.70559523	0.7439354
Phase-1 RCT-294	0.85872024	0.9534154	0.8778876	1.1412474	0.9806157	1.5854872	1.0774847	0.9718492	1.0147318	0.8520702	0.483394	0.69619237	0.7956587	0.7490302
Phase-1 RCT-151	1.3924136	1.2392589	0.87842485	0.8420705	0.8740994	1.4307798	1.2325741	0.93136384	1.1426333	1.3270348	1.4740139	1.5690469	1.039461	1.0316315
Phase-1 RCT-158	0.9543601	0.9850781	0.837111	1.0716238	0.8357262	0.7096809	0.707161	0.95031723	0.9452888	0.8214027	0.6891304	1.3418604	1.2351862	1.0763624
Phase-1 RCT-221	0.80226734	1.05861	0.8342958	0.6768276	0.6357262	0.7096809	0.707161	0.95031723	0.9452888	0.8214027	0.6891304	1.3418604	1.2351862	1.0763624
Phase-1 RCT-235	0.8654445	1.0440864	0.9137028	0.8582018	0.8686343	0.8275328	0.8813444	0.7561052	0.9726518	0.8188954	0.74777013	0.8947681	0.78094345	0.9259038
Organic anion transporter 3	1.0244745	0.78597573	1.0030552	1.0035155	1.1261137	1.2914017	1.0798856	0.9164082	1.6660311	1.2532448	1.1056117	1.15108	1.0669737	0.9022784
Matrix metalloproteinase-1	1.1462861	0.8304421	1.1764649	0.69900316	1.2222726	0.7990318	0.9520485	0.8625777	1.0034385	0.85287166	0.8125105	0.56891094	0.92150414	0.8502538
Urinary protein 2 precursor	1.378182	1.263121	1.2677396	1.0857841	1.4014637	0.9801304	1.1541833	1.9512178	0.6873797	0.6534094	0.46206877	0.44481403	0.92150414	0.8502538
Phase-1 RCT-212	1.0374302	1.1488208	1.0001659	0.9831838	0.8807353	1.114313	0.916162	0.93637645	1.0870261	1.0778021	1.1176935	1.1028128	1.0394447	0.97581184

(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes=neer, necrosis observed; yes=both, necrosis with inflammation observed; no, no inflammation observed

(5) Predictive gene (as in Table 18 and as included in Table 25)

Table 28. Expression Data for 6 Hour Timepoint (1)													
Compound-Dose (2)	ISON 50	ISON 50	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200	ISON 200
Animal Number (3)	1942	1943	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	1.0007716	0.9769237	0.9524644	1.0435553	0.8959589	0.9527162	0.9599222	1.0214511	1.0534316	0.885165	0.822666	3.71032	0.7559576
Insulin-like growth factor binding protein 1	1.0275779	1.177433	1.0215728	1.0650066	1.0353747	0.9228666	0.9914688	1	0.9273405	0.9407862	3.4147327	1.6807026	3.5592771
Gadd153	0.94551885	1.1075269	1.076363	0.89455184	0.9339406	1.093317	0.9050215	1.2139977	0.9357614	0.9576154	1.521622	1.802577	1.741566
c-myc	1.0977604	1.1842904	1.1577971	1.0725656	0.84416595	0.9670663	0.9303593	1.0441181	0.8604845	1.0852988	1.0707154	1.143029	1.6927562
NFK	1.0375043	0.9433064	0.9081122	0.9857653	1.3108917	0.96603113	1.2512745	0.7750043	1.0134639	1.0895011	1.4543306	0.9089365	0.80734056
Heme oxygenase	1.3735643	1.00102	1.2013583	1.3533628	1.3533628	1.1688439	0.9179134	1.4204366	1.0339563	1.2818272	3.533252	3.4081213	4.7762593
Cathepsin L sequence 2	0.977453	1.1637768	1.062555	1.1727688	1.1630628	0.91123575	0.9453426	1.0554012	1.0359797	0.9562275	1.2456201	1.6510729	1.0729297
Phase-1 RCT-108	0.9618218	1.0545447	1.03156713	1.09154322	1.1215392	1.0220715	1.0693212	1.009291	1.068352	1.0247997	1.0008346	1.2913306	1.0001637
Phase-1 RCT-111	1.414619	1.1192555	1.2541689	1.2541685	1.2541685	1.1166872	1.1166872	1.1166872	1.0914179	1.0914179	1.0914179	1.0914179	1.0914179
Aspartoacylase	0.9056254	0.9055133	0.94527607	1.024345	0.8965884	0.9601508	0.9663394	1.1529513	1.0256714	1.0352508	1.0089591	1.1876981	0.91866
DNA polymerase beta	0.96571295	1.0470864	0.9077519	0.964077	0.8964536	0.93115194	0.9363534	0.9471395	0.9180903	0.92884177	1.9078451	1.4440484	1.9140434
Phase-1 RCT-103	0.94431317	1.009689	0.9477512	1.0346983	1.047779	1.1144748	0.8892218	1.1067186	1.030481	0.9770589	1.3485120	2.7027125	1.3943073
Ribosomal protein S9	0.9975996	1.0273173	0.989752	1.0144848	0.9296726	1.2411363	0.9500888	1.363971	1.0686254	1.0718354	1.2145118	1.0940305	1.3604777
Phase-1 RCT-114	1.114612	0.9491843	1.0144848	1.0737084	0.9296726	1.2411363	0.9500888	1.363971	1.0686254	1.0718354	1.2145118	1.0940305	1.3604777
Phase-1 RCT-16	1.1931536	1.0177675	1.1176807	1.1524097	1.1150111	1.3293983	1.0525502	0.9743962	0.9535344	0.9271356	5.560862	4.125807	2.837201
Macrophage inflammatory protein-2 alpha	0.84816967	0.90554116	0.93155855	0.8938019	0.8633415	0.9238848	0.93798796	1.095331	1.1392101	0.9016523	2.760559	1.8117344	2.837779
NGF-inducible anti-proliferative putative secreted protein (PC3)	1.0495213	1.150155	1.1886306	1.4436544	1.2580333	1.018488	0.9675913	1.0513598	0.9550132	0.86280016	0.81022537	0.8870863	1.0861695
Phase-1 RCT-181	1.1300342	1.0475516	1.037817	1.070305	1.085447	1.0252407	0.9671287	1.0940688	0.9834691	1.007117	1.1417121	1.3300706	1.1741174
Phase-1 RCT-53	0.95665896	0.968235	1.0212193	0.9783633	0.9367739	1.0851439	0.9702255	1.0612698	0.9210834	0.93676984	1.7591627	1.5542681	1.9579474
CytD3	0.1333171	0.0560417	0.07634275	0.7889051	1.0231646	1.056747	1.1003542	0.9883808	1.0329039	1.0036707	1.2772833	1.514429	0.9877153
Phase-1 RCT-108	0.9407147	0.9888424	0.98907648	0.7835416	0.70360154	1.4055681	0.9403274	1.1935055	1.1828065	1.1694535	48.48836	64.934826	0.856523
Phase-1 RCT-56	1.1211532	0.8942265	0.88075387	0.9271148	1.0234368	1.0501163	0.9483267	1.14749	0.9748004	1.0180936	1.1266563	0.9276	1.1346991
Phase-1 RCT-192	1.007772	0.86108955	1.073853	0.9854898	1.045393	1.420117	0.9238005	0.920476	0.9255733	0.9381112	1.9255188	1.678697	0.84988487
Acetyl-CoA carboxylase	0.900707	0.9521675	0.9676374	0.8862305	0.810987	1.0210935	0.9055684	1.068678	1.0411197	1.0051137	1.0410357	1.440718	0.99710237
Cystatin C	0.97101957	1.0545429	0.9043004	0.8682144	1.029769	1.090362	1.0459692	0.963378	1.046252	0.9892807	1.1603134	1.6205678	0.9679743
Phase-1 RCT-95	1.1067014	1.0647405	1.0148604	0.9320468	1.028539	1.0407621	1.0359521	1.0746258	1.0186355	1.0002662	1.0213331	2.3048933	1.0945948
Phase-1 RCT-49	0.91018814	1.0070521	1.0446242	1.1138271	1.0359521	0.9551935	0.9582775	1.08355	1.056436	1.1524916	1.1695695	1.213817	1.5680188
Phase-1 RCT-9	1.5554421	1.0632559	1.2373629	1.1074028	1.0235751	0.98533814	0.8557249	1.0077393	0.8864238	0.7326446	1.0861988	1.0243403	0.8324655
Gadd45	1.0588023	0.9245344	0.9632614	0.9591276	0.9120701	1.2201904	0.982242	1.050922	0.9854559	1.026679	0.9675209	1.8357324	1.023481
Phase-1 RCT-156	0.9906981	1.068987	0.8894931	0.9316694	1.0240752	1.035301	0.9822724	1.1377988	0.9969536	1.0969328	1.3025494	2.2058752	1.593539
Coilin	0.99674606	0.93421453	0.961387	0.92013468	0.8942928	1.035301	0.9822724	1.1377988	0.9969536	1.0969328	1.3025494	2.2058752	1.593539
Phase-1 RCT-127	1.0996436	1.2752298	1.2374929	0.9941824	0.8376965	0.9452556	0.994046	1.1202545	0.9969536	1.0969328	1.3025494	2.2058752	1.593539
Macrophage inflammatory protein-1 alpha	1.1132207	0.9522577	1.103619	1.0479739	1.0711576	1.0474906	1.0001294	0.9389355	0.9249278	0.849278	0.849278	0.849278	0.849278
Zinc finger protein	0.75988574	0.8692796	1.1143031	1.1458946	1.2060397	0.8932053	0.90682185	0.9232394	0.81415915	1.0149715	2.564585	1.6571004	1.9901378
Glutamine synthetase	1.0091249	0.9634552	0.87137437	0.7801584	0.8744671	1.3865802	1.073919	1.0945578	0.9969879	1.0035049	2.9660189	4.75165	3.497128
Cyt-binding protein	0.9618142	1.0016005	0.97844415	0.9947806	0.96703315	1.0353872	0.8683197	1.0945578	0.9969879	1.0035049	2.9660189	4.75165	3.497128
Phase-1 RCT-242	1.0358231	1.0169141	1.0332341	1.0559249	1.0980883	0.97128224	0.93883547	1.0838232	0.82470014	1.0049565	2.3305053	2.1759653	3.35019
Phase-1 RCT-50	0.968676	1.0158159	0.96870816	0.93156268	1.0182295	1.0618925	0.9548139	1.0348955	0.976259	0.9384632	1.948284	2.2543957	1.691816
Integrin beta1	0.96006734	1.0305937	1.0357588	1.1590117	1.0989945	1.1159241	1.0778109	1.1365919	1.0348955	0.976259	0.9384632	1.948284	2.2543957
Integrin-like growth factor binding protein 5	1.0272285	1.0688599	1.0560359	1.1478703	1.1519157	1.0777171	1.0116659	1.2063398	1.0837133	1.0541209	1.404927	1.4598402	1.7362659
Phase-1 RCT-59	0.962423	1.0496517	1.3092813	1.1927016	0.9968311	1.025185	0.978539	1.0596515	1.056336	1.0814726	2.68238	2.1432696	1.2829205
Phase-1 RCT-76	0.818886	0.8471689	0.8755047	0.8328309	0.841712	0.9807755	0.95893624	1.1518245	1.0521193	1.0327373	1.747278	0.7769785	0.178391
Fertilin H-chain	1.0402896	0.91818446	0.857466	0.953899	0.84274745	1.098146	0.956154	1.207642	1.1189592	1.155212	1.0206359	0.41508076	0.4077805
Selenoprotein P	0.8793532	0.9993382	0.9387153	0.8522559	0.87524164	1.0376538	0.956154	1.207642	1.1189592	1.155212	1.0206359	0.41508076	0.4077805
SELENOMAC1	0.8775948	0.7257708	0.9273025	0.77617705	0.8187451	1.0376538	0.956154	1.207642	1.1189592	1.155212	1.0206359	0.41508076	0.4077805
Phase-1 RCT-214	1.2328237	1.0383247	1.0480717	1.0190657	1.1417803	1.0217377	1.016448	0.9376318	0.9560724	0.9162862	0.805769	0.8162269	0.8927737
Thymidine synthase	0.9881159	1.2443552	0.938572	0.94343305	0.97533137	1.283213	1.0216149	0.9376318	0.9560724	0.9162862	0.805769	0.8162269	0.8927737
Phase-1 RCT-13	0.5596555	0.6006524	0.697478	0.8658594	0.806393	1.1925382	1.235084	0.971514	1.0041509	1.2150387	0.8944612	0.76359246	1.0383986
Nucleosome assembly protein	1.2414287	1.0700731	1.0176927	0.9165236	0.8161728	0.8161728	0.8161728	0.8161728	0.8161728	0.8161728	0.8161728	0.8161728	0.8161728
Cholesterol 7 alpha-hydroxylase (P450 VII)	0.8503636	0.7955671	0.9705164	0.9450145	0.8521274	1.2533336	0.6307002	1.2533336	0.6307002	1.2533336	0.6307002	1.2533336	0.6307002
Vesicular monoamine transporter (VMAT1)	1.2469883	1.0286328	0.968603	1.0421533	0.8521274	1.2533336	0.6307002	1.2533336	0.6307002	1.2533336	0.6307002	1.2533336	0.6307002
Phase-1 RCT-260	1.1406721	1.0008791	0.93805337	0.89400303	0.95283365	0.9511046	0.93805337	0.89400303	0.95283365	0.9511046	0.93805337	0.89400303	0.95283365

Phase-1 RCT-32	1.05174634	1.0284073	0.9193663	0.86819925	1.1799365	1.4209749	0.8720768	1.0547688	1.0821216	1.0272719	1.1401925	1.169869
Proteinase assembly factor 1	0.9437311	1.0523804	1.0195022	1.0282372	1.0117315	1.0080494	0.9982735	0.9778828	0.98600185	1.2247632	1.2352031	1.0599184
Chondroline DNA glycosylase	0.9880124	0.9820317	1.0664771	1.0670602	1.0826454	1.0254344	1.0345993	1.071013	0.8676703	1.0542516	1.2042111	1.1085553
Phase-1 RCT-42	0.9835014	0.9823377	0.9733022	0.9805174	0.9876186	0.9895666	0.9841623	1.0164995	1.0287018	0.904632	0.7904565	1.0171155
Matrin F1G	1.2168912	1.031057	1.2049702	0.9813076	1.3553331	1.1761152	1.335163	0.9691126	1.0620861	1.1610339	0.4678134	0.62727195
Phase-1 RCT-184	1.0366718	0.9306677	0.9839838	0.9517263	0.9682601	0.9780135	0.914694	0.9228066	0.9672457	0.9063506	0.71913594	1.1590707
Phase-1 RCT-168	0.9897769	1.0074531	0.7485231	0.8022584	0.7106975	0.9605346	0.8640118	0.9240697	0.901916	0.8164327	0.3835167	0.6511258
Phase-1 RCT-119	1.1397798	0.940692	1.2261946	1.2368007	1.2360411	1.0418226	0.9691126	0.9049457	0.9278532	0.6594038	0.63277537	0.786408
Carbonic anhydrase II	1.1642908	1.1216606	1.091628	1.1168948	1.2280782	1.1937033	1.3930412	1.048012	0.9658191	0.9535055	0.7857553	1.2241854
Tryptophan hydroxylase	1.1535026	0.82574083	1.1433089	1.1325338	0.98750275	0.9846185	1.060993	0.99428776	0.92151177	0.92151177	0.2071462	0.7894883
Phase-1 RCT-71	0.89515673	1.0074083	1.1433089	1.1325338	0.98750275	0.9846185	1.060993	0.99428776	0.92151177	0.92151177	0.2071462	0.7894883
Phase-1 RCT-179	1.0524563	0.97104655	0.94494826	0.87836244	0.8671711	1.2304059	0.88716994	0.88716994	0.88716994	0.88716994	0.88716994	1.0116008
Phase-1 RCT-161	1.2644585	1.0436232	0.8774453	0.7920463	1.0693477	0.9036433	0.93411344	1.057394	0.9747657	1.0729353	1.0371607	1.0116008
Phase-1 RCT-207	1.0106594	1.0672678	1.0348487	1.0806477	1.088262	0.8513773	0.9164333	0.93411344	1.057394	0.9747657	1.0729353	1.0371607
Phase-1 RCT-144	0.8017897	0.9716827	1.0246837	1.088262	1.158262	0.8513773	0.9164333	0.93411344	1.057394	0.9747657	1.0729353	1.0371607
Phase-1 RCT-226	1.3094153	1.6439751	1.009077	1.2699955	2.112223	0.8094559	1.1413211	0.8455951	1.0993338	1.933488	1.5737506	1.4749446
Cytochrome P450 2E1	0.71936893	0.6189453	0.901944	0.80552167	1.0065986	1.102402	1.060757	0.8455951	1.0993338	1.933488	1.5737506	1.4749446
D-1	0.9899711	0.9398923	1.0170364	1.008812	1.008812	0.8653642	0.9089333	0.9678028	1.00455	1.160744	0.9655038	2.822228
Thioredoxin-1 (Txi1)	1.1230812	1.0713119	1.010364	1.008812	1.008812	0.8653642	0.9089333	0.9678028	1.00455	1.160744	0.9655038	2.822228
Carbonic anhydrase III	1.5971764	1.059785	0.7442405	0.9899316	1.4893219	1.2750098	1.245173	0.7353717	0.7070786	0.3269733	0.1367677	1.0052402
Phase-1 RCT-140	1.0591717	1.042083	0.9775827	1.0686897	1.0268444	1.0094295	1.0125313	1.0032027	0.9205232	0.8464164	0.6835923	0.84165436
Complement component C3	1.0078036	0.96554025	0.9253084	0.805109	0.7693197	1.2479589	0.8782087	1.1937771	1.0943105	1.17793	1.3594397	1.4643393
Glucokinase	1.0068686	1.6297134	0.7240624	0.7982284	0.465747	0.465747	0.465747	0.465747	0.465747	0.465747	0.465747	0.465747
Phase-1 RCT-173	0.9584365	0.9998043	0.9423208	0.9323573	1.4045055	0.9767616	0.9636476	0.94569147	0.999205	1.023182	0.9971294	0.8668762
3-methyladenine DNA glycosylase	0.9617858	1.063002	1.0187123	1.0802994	1.0802994	1.0754836	1.0424678	1.072564	0.98518074	0.7941292	0.6148483	0.42823043
Penicillin multifunctional enzyme type II	0.92754046	0.9039344	1.05777	1.0566063	1.0393927	1.0367752	1.0424678	1.072564	0.98518074	0.7941292	0.6148483	0.42823043
Phase-1 RCT-40	1.0684735	0.9785754	0.7637365	0.6748392	0.54465044	1.08271	1.093525	1.1853378	1.1683637	1.1076714	0.2829463	0.3149856
Saracostin marker protein-30	0.9046062	1.0156518	1.2254035	1.1932332	1.0737734	0.7241561	0.979392	0.8867274	1.020949	0.98518074	0.7941292	0.6148483
Cytin G	0.9046062	1.0156518	1.2254035	1.1932332	1.0737734	0.7241561	0.979392	0.8867274	1.020949	0.98518074	0.7941292	0.6148483
Helicobacter-associated antigen ME491	0.9670073	0.96662	0.7895012	0.6608316	0.8404416	1.0911762	1.0841086	1.043178	0.9617333	0.8318935	3.248879	1.4767443
Phase-1 RCT-28	0.95509764	0.9775539	1.0582728	1.0141515	1.0495992	0.86591233	1.0071777	1.022335	1.0702772	1.0042298	0.8553438	0.88407286
Alcohol dehydrogenase 1	1.0739713	1.1862309	1.0521553	0.958614	0.939155	0.8344268	1.0295555	1.0232941	1.0402478	1.0535997	0.9476538	1.167795
Stem cell factor	1.0194987	1.0347074	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753	0.9429753
JNK1 stress activated protein kinase	1.2053657	0.8071423	1.0587832	1.0523338	1.099332	0.9324921	0.835499	0.8632738	0.95150103	0.9729584	0.8963175	1.21065512
DNA topoisomerase I	1.392555	1.094456	1.1185402	1.0920348	1.179835	0.9249211	0.835499	0.8632738	0.95150103	0.9729584	0.8963175	1.21065512
Phase-1 RCT-55	1.1333488	1.0054521	1.1789765	1.0979538	1.041174	0.9635043	1.0942243	1.2004129	1.1000584	0.8963175	1.21065512	1.21065512
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.98921543	0.99770266	1.1369532	1.0490385	1.1940002	1.2342781	1.0894998	1.2267095	1.0038025	0.939637	0.93454236	0.7705098
Phase-1 RCT-280	1.0276743	1.1257676	1.126045	1.1676245	1.1636626	0.9508176	1.0363431	1.1140348	1.0666055	0.97036785	20.531637	12.377859
Superoxide dismutase Mn	1.0314034	0.93686225	0.9720527	0.89731383	0.5525056	0.8657689	0.88854734	1.0923228	0.7785381	0.7423398	1.0685583	1.5413589
Beta-tubulin, class I	1.1840132	0.9719207	1.4076178	1.4582316	1.4288117	1.1091687	0.9810862	0.79747874	0.88216586	1.3506586	0.4985086	0.45168683
Carbamoyl phosphate synthetase I	0.972401	1.0347123	1.0468829	1.1162064	1.02984	1.1364292	1.0678913	1.1678048	1.0942316	0.9677631	1.3940253	1.3940253
Diacetylglutamate kinase zeta	1.0344605	1.0534729	1.021815	0.8705191	0.85720694	1.4302566	1.0894458	1.8342328	1.2051562	1.392908	4.891912	4.891912
Phase-1 RCT-141	1.120632	0.83709425	0.92181295	0.5276954	0.8579864	0.9798665	0.927863	0.88909646	0.9133245	0.8470209	1.987891	1.9708706
14-3-3 zeta	0.90701365	0.67315155	0.9447147	1.3242338	0.846312	0.664848	0.7874003	0.8774339	0.8579134	0.74407697	2.5017965	1.5712758
Camrre-actin, cytoplasmic	0.9668991	1.1772331	0.94227694	0.867789	1.0647408	0.96302587	0.94749546	0.9171269	1.0865928	0.97240454	1.4947401	1.6624883
Ribosomal protein L13A	0.9334734	1.081199	1.004733	0.89427993	1.0914355	0.8536773	1.016844	1.0063257	1.0344843	0.8945214	1.8297493	2.3381355
Phase-1 RCT-65	1.306656	1.5004582	1.271007	1.3236535	1.3635511	1.2254646	0.94364345	0.8088848	1.0053203	1.4657748	1.4623305	1.8214475
G-Jun	1.4503983	0.8669743	1.2720273	1.1770811	1.3454766	1.2611448	0.9222846	0.96103315	0.9729315	0.5983142	1.0733088	0.733268
Protein O-mannosyltransferase 1 (Pomt1)	1.1724387	1.2746265	0.9683817	1.0442383	0.89405838	0.9594442	1.1410893	0.79875985	0.9333985	0.84431046	0.8504742	0.8521887
HMG CoA reductase	1.1724387	1.2746265	0.9683817	1.0442383	0.89405838	0.9594442	1.1410893	0.79875985	0.9333985	0.84431046	0.8504742	0.8521887
Phase-1 RCT-12	1.0728949	1.0236034	1.2581146	1.0732973	0.9246071	1.0590816	1.095081	1.121718	1.0588284	1.5048431	1.1177357	1.2243353
Interferon related developmental regulator IFR01	0.6533687	0.92556254	0.8771174	0.72941055	0.9246071	1.0590816	1.095081	1.121718	1.0588284	1.5048431	1.1177357	1.2243353
Glucose-regulated protein 78	0.98412283	0.7930035	0.671078	0.6811611	0.6811611	0.6811611	0.6811611	0.6811611	0.6811611	0.6811611	0.6811611	0.6811611
3-hydroxyisovaleryl-CoA dehydrogenase (HSD3B1)	1.0309072	0.9858942	0.94478	1.0624574	1.0822658	1.023317	0.9826205	0.98404156	1.0206888	1.0206888	1.0206888	1.0206888
Caspase 6	1.2413368	1.0501451	0.3783185	0.73853026	0.73853026	1.0824522	1.0203048	0.750747	1.0157723	1.3243555	48.93583	85.23488
Phase-1 RCT-169	1.0394638	1.065802	1.0236034	1.1421398	1.3815915	1.0674584	1.1294522	1.065479	1.012568	1.0513813	1.63027	1.8056266
Phase-1 RCT-197	1.271723	1.0418711	0.8967238	0.91864771	0.8565795	1.008827	0.856115	0.92003333	0.9737812	0.8848324	0.41185022	0.40707484
Phase-1 RCT-34	1.271723	1.0418711	0.8967238	0.91864771	0.8565795	1.008827	0.856115	0.92003333	0.9737812	0.8848324	0.41185022	0.40707484

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Phase-1 RCT-72	1.1630556	1.1061718	0.9726219	0.9660795	1.1704144	0.9448566	0.9418323	1.0146052	0.9565213	1.1565528	1.2187478	1.389233	1.1051036	0.9259823
Pyruvate kinase, muscle	1.1040556	0.9894905	1.0916533	1.0765395	1.1765395	0.9932455	1.0776537	0.9497194	1.0369557	0.9091506	0.7089783	1.389233	1.1051036	0.9259823
Phase-1 RCT-288	0.9682216	0.9037252	0.7692787	0.7137155	0.8691722	0.9782114	1.1304306	0.9617887	0.9517887	0.9025404	0.5615523	0.7625007	0.5243574	1.1706621
Cytochrome P450 2C39 (alternate clone 2)	1.1257749	1.0342627	1.0310118	1.0361218	0.9815636	0.9713849	0.985385	0.8975649	1.0436151	0.262649	0.396794	0.262649	0.396794	1.1706621
Phase-1 RCT-289	0.6371997	0.7165858	0.8321217	0.8168245	0.7260964	0.8620956	0.8620956	0.8620956	0.8620956	0.8620956	0.8620956	0.8620956	0.8620956	0.8620956
Phase-1 RCT-290	0.9461395	0.9100074	1.4572315	1.0440445	2.0911665	1.0017263	1.0017263	1.0017263	1.0017263	1.0017263	1.0017263	1.0017263	1.0017263	1.0017263
Phase-1 RCT-291	1.046053	1.0671922	0.9829296	0.9659405	1.0784272	1.0024481	1.0024481	1.0024481	1.0024481	1.0024481	1.0024481	1.0024481	1.0024481	1.0024481
Methyl-CoA carboxylase alpha	1.041106	0.8927173	0.9292926	0.9029177	1.4045641	1.2508465	1.0715331	1.2508465	0.9933323	0.8663523	0.8621086	0.8940058	1.3025611	0.9654547
Cytochrome P450 1A2	1.122124	1.7645217	1.2885363	1.6187009	1.4045641	1.2508465	1.0715331	1.2508465	0.9933323	0.8663523	0.8621086	0.8940058	1.3025611	0.9654547
Phase-1 RCT-287	0.9715244	0.9737637	0.9376307	0.9376307	1.053165	0.7883174	1.1511059	1.053165	0.7883174	1.1511059	1.053165	0.7883174	1.1511059	1.053165
Monoclonal antibody B	0.7481595	0.8376733	1.0626713	0.9926713	1.0952627	1.2813547	1.030824	0.9926713	1.0952627	1.2813547	1.030824	0.9926713	1.0952627	1.2813547
Phase-1 RCT-284	0.9097354	0.8535366	0.8422566	0.8387825	0.8651521	1.239378	1.239378	1.239378	1.239378	1.239378	1.239378	1.239378	1.239378	1.239378
Peroxisome proliferator activated receptor gamma	0.959559	1.9550068	1.1310933	1.0976716	1.103576	1.3673216	1.0355948	0.9166544	0.9166544	0.9166544	0.9166544	0.9166544	0.9166544	0.9166544
Phase-1 RCT-143	0.9665593	0.8246582	0.6951674	0.9104588	0.9725604	0.9357087	0.9441603	0.9357087	0.9441603	0.9357087	0.9441603	0.9357087	0.9441603	0.9357087
Phase-1 RCT-281	1.0053994	0.90613014	1.0254557	1.0959941	0.9735716	0.9735716	1.1731634	1.1731634	1.1731634	1.1731634	1.1731634	1.1731634	1.1731634	1.1731634
Phase-1 RCT-117	1.0625942	0.8395294	1.1334646	1.1119171	1.106316	1.005316	1.005316	1.005316	1.005316	1.005316	1.005316	1.005316	1.005316	1.005316
Guthrie-S-transferrin beta-1	1.2014712	0.8388934	0.9607677	0.8216296	0.753203	1.0419251	0.8300831	0.8244924	0.9767868	0.8300831	0.8244924	0.9767868	0.8300831	0.8244924
Phase-1 RCT-91	0.94955236	0.8508639	0.992068	0.9475371	0.8950986	0.9342304	0.8534887	1.0200046	0.9767868	0.8950986	0.9342304	0.8534887	1.0200046	0.9767868
Phase-1 RCT-41	1.0666229	0.9963065	0.9370465	0.9512784	1.4801328	1.0054348	1.0357783	0.7597313	0.8434835	0.8314855	0.8999003	1.1635935	0.8168325	1.433313
Phase-1 RCT-142	0.8871297	0.9401098	0.9781444	1.1826566	1.0247668	0.8078403	0.9769324	0.9769324	0.9769324	0.9769324	0.9769324	0.9769324	0.9769324	0.9769324
Actin receptor type II	1.0885291	0.7100827	1.3386273	1.1855076	2.3357434	1.09724	1.1826566	1.09724	1.1826566	1.09724	1.1826566	1.09724	1.1826566	1.09724
Glycine methyltransferase	0.65758616	0.7768596	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528
Phase-1 RCT-281	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528	1.0128528
Ciliary neurotrophic factor	0.97110764	1.0206268	1.058542	0.9982535	0.9378069	0.9341268	0.9233661	0.9892739	0.9892739	0.9892739	0.9892739	0.9892739	0.9892739	0.9892739
Gap junction membrane channel protein beta 1 (Gp1)	0.9536494	1.2220088	0.9540653	1.0760705	1.390799	1.5277916	1.4571884	0.9898237	1.258775	1.0084825	0.5561827	0.5551354	0.40217384	1.2820857
Phase-1 RCT-88	1.0759774	1.0906545	1.058034	0.93234956	0.8904136	0.9976158	1.0470465	1.0422032	0.9523604	0.9523604	0.9523604	0.9523604	0.9523604	0.9523604
Phase-1 RCT-287	1.0620903	0.9437181	1.1534063	1.1490415	1.116273	0.9471638	0.9471638	0.9471638	0.9471638	0.9471638	0.9471638	0.9471638	0.9471638	0.9471638
Reling-binding protein (RBP)	0.8671904	0.8977206	0.9624141	0.9580074	1.0271393	0.8274734	1.0288747	0.8571838	0.9649392	0.9359597	0.9359597	0.9359597	0.9359597	0.9359597
Very long-chain acyl-CoA synthetase	0.76101036	0.8474174	1.0115439	0.993036	0.9063397	0.9769502	1.216886	0.8571838	0.9649392	0.9359597	0.9359597	0.9359597	0.9359597	0.9359597
Syndecan-1	1.2889186	0.9368966	0.8252512	0.83962405	0.974398	0.974398	0.9723333	0.9057104	0.9969112	1.035738	1.066357	0.9731486	1.170759	0.5428446
Syndecan-1	0.8954023	1.0916599	0.8042497	0.8991654	1.0099118	1.0518378	1.0518378	1.0518378	1.0518378	1.0518378	1.0518378	1.0518378	1.0518378	1.0518378
Phase-1 RCT-145	1.0342443	0.9957982	0.9911016	1.1123116	1.0400725	1.0286405	0.9003134	1.0434864	0.9895309	1.020498	1.37148	1.170529	1.003954	0.5128839
Actin	0.9382065	0.9806993	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065	0.9382065
Phase-1 RCT-89	1.0553303	0.9218834	0.9203638	0.8244523	1.022008	0.9586859	1.0375331	0.8503397	0.9732883	1.024729	0.4843124	0.4596447	0.5128839	0.5128839
Sarcoplasmic reticulum calcium ATPase	1.1481987	0.95571784	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308	0.967308
Alpha-2-microglobulin, sequence 2	0.99670523	0.89632705	1.0767332	1.3285784	1.2440566	0.9831085	0.9831085	0.9831085	0.9831085	0.9831085	0.9831085	0.9831085	0.9831085	0.9831085
Phase-1 RCT-204	0.9575097	0.8822218	1.1394898	1.1514928	1.1822076	0.98726324	0.9844966	0.9955009	0.9725278	1.0208148	0.8971621	0.9422084	1.1763835	1.1930225
Vascular endothelial growth factor	1.0229851	1.0163968	0.9971878	1.0771087	1.0971533	1.2845117	1.057272	1.0162737	1.0295428	1.0003519	0.5614474	0.8123526	1.1117624	1.1117624
NADP-dependent isocitrate dehydrogenase, cytosolic	1.1027197	0.9581456	0.8428694	0.8044283	0.7353923	0.92856055	1.1577048	0.9218812	0.9802655	0.9801476	0.2603418	0.3987594	0.72289135	0.72289135
DNA binding protein inhibitor ID2	0.8545528	0.9127623	0.8563798	1.0683153	0.900128	1.1379757	0.9555938	1.1521802	1.0454582	0.9136202	0.8543381	0.71702976	0.67881143	1.116051
Gluathione S-transferase Ya	0.78542065	0.8465164	0.6959174	0.6959174	0.7600043	0.745811	0.9044235	1.0159966	0.6925716	1.0041105	0.8901563	0.6189907	0.7041917	0.266844
Epoxide hydrolase	0.8169401	0.6409488	1.0639566	0.4071782	1.1731505	1.084949	0.8511585	0.5804543	0.8559975	0.7970973	0.9041783	0.60845435	0.58162534	1.3695344
Insulin-like growth factor I	1.0055254	1.3256341	0.9160503	0.7809503	0.6216284	0.9223839	1.0660337	0.9326337	1.0291185	0.90687825	0.4325246	0.97018575	0.43833207	0.8337215
Prostaglandin H synthase	0.9611734	0.9213542	1.267728	1.1759274	0.8474228	1.2052065	0.9367594	1.3009527	0.9651965	1.1765392	0.4325246	0.97018575	0.43833207	0.8337215
Phase-1 RCT-136	1.1057503	0.9394769	0.8401089	0.8171885	0.9824396	1.158314	1.153282	0.9413135	1.0655013	0.8748218	0.8978253	0.8685307	0.7781837	1.071555
Phase-1 RCT-137	0.8530013	0.8475915	0.7707585	0.6832699	0.7306066	1.0340786	1.0271241	1.0294142	1.0793111	1.0100483	1.0719486	0.7307531	0.8677439	0.5135149
Phase-1 RCT-138	0.9113511	0.8188703	1.006721	0.8038438	0.9688378	0.8984215	0.92864814	1.0367659	0.9714888	0.9446187	1.0706898	0.7352821	1.0717728	0.9026666
Hepatic lipase	0.8826787	0.8773764	0.72650176	0.762334	0.60888124	1.1218385	0.9825698	0.9299979	0.9465327	0.80508763	0.92802444	0.8624841	0.7896069	1.147723
Phase-1 RCT-164	1.0835851	1.0833965	1.2155776	1.0502344	1.003421	0.91152436	0.9565568	0.92646176	0.9539837	0.80508763	0.92802444	0.8624841	0.7896069	1.147723
Acyl-CoA dehydrogenase, medium chain	0.8947108	1.031725	1.135646	1.1762885	0.97145468	0.8327391	0.99471068	1.026804	1.1025473	0.8431827	0.2359702	0.35354602	0.9458035	1.245194
Gluathione S-transferase Y02 subunit	1.3165226	0.8488014	0.9272863	0.7338065	0.75082164	0.7730083	0.87258154	0.7718084	0.8438374	0.8851283	0.84635204	1.1841008	0.8333466	2.028124
Carbonic dehydratase	1.0323071	1.2019883	1.0656375	1.136586	1.0725926	1.029055	0.9555284	1.0261704	0.9433763	0.9056312	0.7910874	0.5642468	0.7600535	1.432363
Phase-1 RCT-166	1.1361978	0.7822707	1.0889274	0.90754956	0.8164763	1.054212	1.1578946	0.95632	0.9171406	0.92938143	1.3411764	0.701206	1.1731261	0.37627214
Apolipoprotein E	1.0120109	1.042125	0.6887394	0.6954955	0.83901507	1.0186162	1.1578946	0.95632	0.9171406	0.92938143	1.3411764	0.701206	1.1731261	0.37627214
Uridylate-glucuronosyltransferase	0.89180076	1.095989	0.7882676	0.8528993	0.9384118	0.9339687	1.0328607	0.76352068	0.83753525	0.829325	0.829325	0.829325	0.829325	0.829325
Gluathione S-transferase P1	1.0524738	0.9855161	0.82620104	0.76321584	0.6784314	1.0688397	1.037296	1.039372	1.237848	1.10452718	1.0722086	0.5901284	0.8332773	1.4286224
Naalidase isomerase related protein (ERp72)	1.0559105	1.0910479	1.0184326	0.8718903	0.8718903	1.0224812	0.954464	1.1632006	1.1632006	1.1632006	1.1632006	1.1632006	1.1632006	1.1632006
Ribosomal protein L13	0.6975838	0.8983226	0.6584156	0.7592834</										

Phase-1 RCT-3	1.0980267	1.0125556	0.98372406	1.0436438	1.0379549	0.98913464	0.9990101	0.92208924	1.0068872	1.1583337	1.5183024
Felitin beta (Fetub)	0.9282918	1.0189128	1.027644	0.86939744	0.9242497	1.0276126	1.0276126	1.0276126	0.9242497	0.9242497	0.9242497
3-hydroxyisovalerate dehydrogenase	1.1130111	0.9786926	0.7859537	0.91917384	0.86939744	0.9242497	1.0276126	1.0276126	0.9242497	0.9242497	0.9242497
Carbonyl anhydrase III, sequence 2	0.9554649	0.9240388	0.9883376	0.8611915	1.0254467	1.0406632	1.0653353	1.0059494	0.9177017	0.9177017	0.9177017
Phase-1 RCT-10	0.95894404	0.8562632	0.8424395	0.8024022	0.7633676	0.76138836	0.76138836	0.76138836	0.76138836	0.76138836	0.76138836
Alpha-2-microglobulin	1.251728	0.9591655	1.1005684	0.907436	1.0442735	1.0515179	1.0515179	1.0515179	1.0515179	1.0515179	1.0515179
Dynamin-1 (D100)	0.9744752	0.9001273	0.89727416	0.9252981	0.931382	1.1157194	1.053671	1.0888911	0.9274804	0.9274804	0.9274804
LYSL oxidase	1.0801078	0.962951	1.3653004	1.425292	0.8160388	0.9487777	0.951182	0.9408675	0.951182	0.951182	0.951182
Phase-1 RCT-252	1.1530592	0.95390754	1.1542218	0.9525981	0.931382	1.1157194	1.053671	1.0888911	0.9274804	0.9274804	0.9274804
Phase-1 RCT-28	1.047521	0.9690894	0.9796074	0.9328786	0.8160388	0.9487777	0.951182	0.9408675	0.951182	0.951182	0.951182
Phase-1 RCT-278	0.8712707	0.929747	1.0412768	0.9600571	1.1539215	0.8129122	1.0507725	0.971661	1.0888911	1.0888911	1.0888911
Phase-1 RCT-42	0.9882912	0.9507747	1.25582	0.9950541	1.1615021	1.0710793	1.0710793	1.0710793	1.0710793	1.0710793	1.0710793
Cytochrome P450 2C11	1.0013465	1.0219748	0.9079077	0.9663645	1.0196221	1.0558986	1.2382896	0.8575675	1.0439762	1.0439762	1.0439762
Complement factor 1 (CF1)	1.002277	0.9429859	1.0408714	0.829453	0.7859537	1.3404813	1.2302276	1.0682636	0.9491892	0.9491892	0.9491892
Activating transcription factor 3	0.9176257	0.907017	1.0408714	0.829453	0.7859537	1.3404813	1.2302276	1.0682636	0.9491892	0.9491892	0.9491892
Focal adhesion kinase (p125FAK)	0.94602866	1.0046738	0.9959777	1.04399	0.932381	0.9807306	0.9308013	0.9308013	0.9308013	0.9308013	0.9308013
Phase-1 RCT-259	0.8950204	0.9187394	0.92566535	0.88334754	1.0034567	1.0270617	1.0318418	0.8464066	0.9361406	0.9361406	0.9361406
trans-responive element-binding protein	0.85765747	1.3803949	1.1631116	1.3042229	1.273571	1.0519833	1.0017977	0.9243936	0.9759415	0.9759415	0.9759415
MHC class II antigen RT1A10 alpha-chain	0.6302028	0.7848357	0.92881066	1.0357335	1.1858985	0.92315483	1.0017977	0.9243936	0.9759415	0.9759415	0.9759415
AT-3	0.85323	0.9733576	0.96110815	0.94333833	0.90516783	0.91973994	0.9618197	0.9243936	0.9759415	0.9759415	0.9759415
Phase-1 RCT-171	0.9766657	0.93130266	0.79552054	1.0181678	0.9377184	0.9066724	0.9243936	0.9759415	0.9759415	0.9759415	0.9759415
Phase-1 RCT-83	0.9094623	0.7613246	0.7571247	0.6533937	0.9710654	1.004659	0.95917405	0.9618197	0.9243936	0.9243936	0.9243936
Phase-1 RCT-270	0.915319	1.0382236	0.9654208	0.95167744	0.96746866	0.86558015	0.9141625	0.88519144	0.91601816	0.91601816	0.91601816
Colony-stimulating factor-1	1.0818418	0.9351102	0.95267597	0.8956305	0.8518307	0.9274402	1.0027079	1.1455114	1.06527818	1.06527818	1.06527818
N-cadherin	1.012896	1.010976	0.9004656	0.888859	0.8915897	0.8471665	1.0045157	0.8555969	0.9622756	0.9622756	0.9622756
Phase-1 RCT-62	1.026257	1.0686117	0.8354546	0.9869605	0.98505437	0.9828626	0.9713847	1.0555969	0.9622756	0.9622756	0.9622756
Phase-1 RCT-22	1.3910724	0.95174184	1.0354613	0.8201318	1.0277208	0.9828626	0.9713847	1.0555969	0.9622756	0.9622756	0.9622756
AT-3	0.916553	0.98429885	0.7371445	0.95267597	0.8956305	0.8518307	0.9274402	1.0027079	1.1455114	1.06527818	1.06527818
Phase-1 RCT-18	0.9376011	0.97311654	1.0022794	0.9250242	0.9476258	0.95107236	0.915875	0.89557484	0.9818834	0.9818834	0.9818834
Phase-1 RCT-123	1.0189318	1.1089534	0.85046285	0.7879187	0.63565225	0.916594	0.97145134	0.9078848	0.9585822	0.9585822	0.9585822
Phase-1 RCT-65	0.9144154	0.8602819	0.7700899	0.7430224	0.95758453	1.0185408	0.9550195	0.88318223	1.0054461	1.0054461	1.0054461
Equilibrative nucleoside/nucleotide transporter	0.7949852	0.8645886	1.0727951	0.9414442	0.8095073	1.0784576	1.2098208	0.8838327	0.8653335	0.8653335	0.8653335
Glucose transporter 2	1.0577882	0.91027416	1.0590306	1.085502	0.98018075	1.0447546	0.7855882	0.9310377	0.6967738	1.0577153	1.0577153
Multidrug resistant protein-2	1.0681944	0.8828937	1.076278	1.2234182	1.0865344	0.9721395	1.128644	1.0541419	0.9810248	1.084724	1.084724
Multidrug resistant protein-1	1.1213418	1.0933385	1.074589	1.2001724	1.0837235	1.128644	1.0541419	0.9810248	1.084724	1.084724	1.084724
Phosphatidylethanolamine-binding protein	1.1342828	1.068888	0.93264997	1.0435437	1.0687058	0.9302011	0.88206434	1.0540365	1.0610362	0.9776408	1.2409182
Phase-1 RCT-180	1.0579704	1.117511	1.1000801	1.1473912	1.083481	1.1188807	1.0078917	1.097724	1.0282616	1.0282616	1.0282616
Integrin beta-4	1.0712711	1.1095519	1.5760638	2.2428071	2.0678034	1.602771	1.291317	0.88844955	1.0552562	1.1295148	0.9807315
NAADH cytochrome P450 oxidoreductase	0.95235545	1.1142666	1.972612	1.1825654	1.1069803	1.030243	1.0549738	1.1345086	1.0220346	1.0817804	1.2486782
Wdr1	1.3955896	1.1488041	0.871712	0.784811	1.2080218	1.0594495	1.15426	1.0634185	1.098298	1.0795071	1.0795071
Endogenous retroviral sequence, 5' and 3' LTR	0.9775694	0.9718048	1.031622	0.9811037	1.03628	1.0424008	1.0586219	1.0031986	1.0370667	0.92913926	0.804662
Phase-1 RCT-53	0.937734	0.9574438	1.0346231	1.016222	0.9811037	1.03628	1.0424008	1.0586219	1.0031986	1.0370667	0.92913926
Phase-1 RCT-240	0.964187	1.0425202	0.930166	0.7877285	0.9193973	1.0727965	1.1328	0.9759824	0.9831165	0.9831165	0.9831165
Osteopontin	0.9943915	0.9068231	0.9247825	0.9737058	0.8275799	0.8655293	0.9102869	1.008535	0.9431645	1.0455863	1.0920808
Organic anion transporting polypeptide 1	1.027223	0.8283084	0.97138084	1.041304	0.9595207	1.2412578	1.260251	0.8555812	1.0544735	0.8871704	0.8871704
Phase-1 RCT-241	1.0678684	1.07190053	1.0430236	0.955584	0.9536442	0.95969797	0.95969797	0.95969797	0.95969797	0.95969797	0.95969797
Tissue factor pathway inhibitor	0.97062366	1.1287719	1.0981865	1.0536905	1.035996	1.1487155	1.0856031	1.2354804	1.054411	1.189767	0.9387615
Cyclin-dependent kinase 4 inhibitor P27kip1 (p27kip1)	1.178599	1.3135538	1.2228092	1.2712114	1.2121495	1.3799179	1.1316744	1.1011488	1.4012583	1.550603	0.9219397
Phase-1 RCT-252	1.2286593	1.0469973	1.0042769	1.020341	1.0670291	0.9650188	1.0214796	0.9813815	1.2571783	0.8180636	1.0694243
Phase-1 RCT-38	1.1241415	1.0153269	1.0886611	1.0547274	0.9506914	0.96258884	0.96258884	0.96258884	0.96258884	0.96258884	0.96258884
Phase-1 RCT-236	1.1104786	1.0691672	0.9559184	0.95270955	0.9150285	0.9511414	1.0533174	1.0393784	1.0412432	0.9491845	1.3154436
Phase-1 RCT-113	0.1892319	0.7315544	0.8905015	0.8286983	1.1659405	1.074746	0.8656808	1.0732472	0.9372754	1.3170637	1.8065592
Adenine nucleotide translocase 1	0.9767371	0.97348864	0.84973454	0.81498873	0.7743746	0.89600224	1.306351	0.7890137	0.8871872	0.88229038	0.8871872
Alpha-1 acid glycoprotein	0.84354515	0.6523065	1.2052568	1.3394336	1.2218274	1.257004	0.9824986	2.0107555	1.2542887	1.4324191	22.56248
MHC class II antigen RT1B-1 beta-chain	0.84558613	0.88958687	0.9454087	0.6265409	0.7202618	1.1488731	1.0051292	0.8839839	0.8482613	1.4008996	1.4280113

Organic cation transporter 3	1.1394317	1.0479101	0.8747047	0.8976676	0.90231615	0.9302733	1.0178218	1.0668445	1.0724347	1.03367	1.3145806	1.3100103	0.936572	0.7041165
Hypoxia-inducible factor 1 alpha	1.0276478	0.9347601	1.1260505	0.84569314	0.85677195	1.0521549	0.94922565	0.99875593	1.0135976	1.0141392	2.1242647	2.5066564	1.8497865	1.2368591
Phase-1 RCT-43	1.0009568	1.0593469	0.9536299	0.8419589	0.9610008	1.0496361	1.0822234	0.96033704	1.01011	0.9805343	1.2635684	1.3428544	0.8761677	0.9629539
Phase-1 RCT-45	1.0572413	1.1656793	1.1015718	0.9504773	0.8893825	1.0632848	0.9417759	1.0595535	0.97797155	1.049817	1.084387	1.6704034	0.99481434	0.8641112
Malate dehydrogenase, cytosolic	0.8620607	0.91025674	1.194133	1.2440565	1.224036	0.9341894	0.9340381	1.0767184	1.0176072	1.1334363	0.98422665	0.42528486	0.6540846	0.72290766
VL30 element	1.3631629	1.5273187	0.9411227	0.97075146	1.6161335	0.84981567	1.1708381	1.1650631	1.09933	0.76398915	1.3307316	1.5513877	0.9401482	0.69040893
Phase-1 RCT-189	1.1221116	1.0827692	1.0134245	1.0555412	0.89091456	1.1045413	0.9493267	1.12705	1.1081838	1.1706821	0.88109304	0.7599942	0.7967046	0.69922205
Alpha-fetoprotein	0.9566591	1.1225623	1.0787351	1.026353	1.0178465	0.94741297	0.98186554	0.9978488	0.99471235	0.9581514	0.7304353	1.0507375	0.9138512	0.8777238
Cellular protein B	0.6977155	0.78312255	0.82426673	0.80200464	0.72683376	1.0479113	0.95597905	1.2637061	1.0535167	1.05923	1.1343135	0.5577751	0.9649788	0.6123523
Tissue plasminogen activator	1.0435558	0.9837095	0.9856804	0.9702781	0.9500659	0.99756576	1.0028566	0.9934112	1.0238967	1.0570024	1.032873	0.6792083	1.2442136	1.0335097
Phase-1 RCT-195	1.0431226	0.9813947	1.0277804	1.0677426	1.0782554	0.9987607	1.0028566	0.9934112	1.0238967	1.0570024	1.032873	0.6792083	1.2442136	1.0335097
Liver fatty acid binding protein	0.7825871	0.8990473	0.73637825	0.863403	0.8124348	0.85341166	0.8787711	1.0689801	0.9755315	0.9471142	1.2146802	0.753554	1.000766	0.7894211
Alcove-1 microglobulin precursor (Arb)	0.9178023	0.95758457	0.8950693	0.8124348	0.85341166	0.8787711	1.0689801	0.9755315	0.9471142	1.2146802	0.753554	1.000766	0.7894211	0.7894211
Phase-1 RCT-151	0.9502298	1.0418274	1.0700697	1.0678572	1.1078074	0.95276317	0.9344125	1.0594329	0.9755315	0.9471142	1.2146802	0.753554	1.000766	0.7894211
Phase-1 RCT-159	0.9655083	1.0378313	1.0955437	1.0327219	0.9724894	1.1761633	1.0387026	1.0639029	1.0259333	1.0588868	1.1619407	1.444511	1.308414	1.2431259
Phase-1 RCT-221	0.91862653	1.0168015	0.9197205	0.8888701	1.0511945	0.9984119	1.0399994	1.0425329	1.0926871	1.017222	1.088779	1.3133769	0.9178911	0.6634937
Phase-1 RCT-235	0.89801053	0.9464768	0.9505613	1.0100391	1.051609	1.0381477	1.037289	0.93454357	0.972176	0.979183	0.9169602	0.8297813	0.6340544	0.81210685
Organic anion transporter 3	1.1040555	0.797064	1.0693126	1.0570588	0.85787547	1.15801	1.1716986	1.1842765	0.84528655	1.0475003	0.46840325	0.9457606	0.6555385	0.77408797
Matrix metalloproteinase-1	0.9343246	0.8084984	0.899126	1.0570588	0.85787547	1.15801	1.1716986	1.1842765	0.84528655	1.0475003	0.46840325	0.9457606	0.6555385	0.77408797
Urinary protein 2 precursor	1.0231919	0.9505279	0.7678255	0.7219254	0.60221195	0.9476535	1.0514728	1.0400233	0.95424324	0.9450388	0.9031324	0.7321776	0.73250157	0.3547058
Phase-1 RCT-212	1.030703	1.0193738	0.9534308	0.9560288	0.9832917	0.88355476	0.9998468	1.0203595	1.0178217	1.0982868	0.63022213	0.7853874	0.8872875	1.2010729

(1) Gene expression data for 8 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes-necr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed

(5) Predictive gene (as in Table 18 and as included in Table 26)

Table 28

Table 20. Expression Data for 6 Hour Timepoint (1)															
Compound-Dose (2)	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3	MET 1.3
Animal Number (3)	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	0.636329	0.66072593	0.4722701	0.6239872	0.9155846	0.9703859	1.0815454	1.170277	1.2372787	0.9915605	0.914017	1.060444	0.67410617	1.2569069	1.2569069
Insulin-like growth factor binding protein 1	1.7123194	1.2044227	1.5668763	1.4602768	0.7797075	0.8704114	1.8379178	0.9951769	1.0241553	1.158038	1.158038	1.1323468	0.613142	1.0171112	1.0171112
Gad65	1.6544668	1.6185909	1.6347424	1.6026114	0.9219889	1.2761987	1.0178604	1.119841	0.9243884	0.9761724	0.951381	0.8922004	1.3051496	1.2156513	1.2156513
c-myc	1.7507888	1.5351422	1.1310045	1.0578954	1.0257578	1.2061241	1.3690506	1.0256888	1.2191901	1.0165009	1.0165009	1.0165009	1.0165009	1.0165009	1.0165009
NIPK	1.0012082	0.8251115	1.328002	1.2222241	1.0717591	1.1257794	1.0582244	1.0582244	0.8632325	0.7681154	0.7681154	0.7681154	0.7681154	0.7681154	0.7681154
Calpactin L, sequences 2	0.917912	0.85197026	0.9666801	1.29992	1.9946654	1.9984133	2.3341227	2.851182	0.637205	0.637205	0.637205	0.637205	0.637205	0.637205	0.637205
Heme oxygenase	0.5262826	0.57900582	0.5422846	0.9404337	1.1937314	1.1937314	1.1937314	1.1937314	1.0482208	0.8670625	0.8670625	0.8670625	0.8670625	0.8670625	0.8670625
Phase-1 RCT-109	0.82207817	0.8713356	0.7859794	0.8506458	1.189856	1.093512	1.2077861	1.4385922	1.171275	0.8216304	0.8216304	0.8216304	0.8216304	0.8216304	0.8216304
Phase-1 RCT-111	0.0245849	1.3214672	1.192167	1.4901671	0.990091	1.2113259	1.4027214	1.3659822	1.171275	0.8216304	0.8216304	0.8216304	0.8216304	0.8216304	0.8216304
Agmatinase	0.7194482	0.7533347	0.600021	0.9519815	1.0371808	1.1504164	1.1810894	0.9640873	0.9528608	0.9528608	0.9528608	0.9528608	0.9528608	0.9528608	0.9528608
RNA polymerase beta	0.8311026	0.90393865	0.8206894	0.9184818	1.171865	1.1653338	1.3321918	1.1319772	1.0624035	0.8250353	0.8250353	0.8250353	0.8250353	0.8250353	0.8250353
Phase-1 RCT-103	0.0036948	0.8872171	0.9007964	0.9726826	1.000913	1.248503	1.3619916	0.9683595	0.9683595	0.9683595	0.9683595	0.9683595	0.9683595	0.9683595	0.9683595
Ribosomal protein S9	1.0185402	1.3465297	0.8517374	1.2035029	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651	0.9897651
Phase-1 RCT-114	2.1768854	1.4221032	2.5069609	1.594527	1.240706	1.110408	0.87575316	1.027107	1.6193378	1.650385	1.4882314	1.1655662	1.2942865	1.5130119	1.5130119
Phase-1 RCT-115	1.1934859	1.3763627	1.372251	1.4357891	0.8197635	0.9817378	1.1691839	1.030679	0.95356925	1.1352926	1.0100117	1.242508	0.7078253	1.2450438	1.2450438
Macrophage inflammatory protein-2 alpha	0.7670687	0.8266925	0.4787976	0.7276106	1.0113196	0.82380754	0.86020285	1.0579156	1.000541	1.2219512	1.0425688	1.038098	0.86180043	1.0103589	1.0103589
NGF-inducible anti-proliferative putative secreted protein (PC3)	1.8986532	3.5378516	1.1209408	2.4857285	1.1726388	1.1192247	1.2584882	1.2033637	1.3006318	1.0430904	1.2351949	1.1673635	0.9537073	1.355685	1.355685
Phase-1 RCT-161	1.1777638	0.95844394	2.0789466	2.176986	0.9232387	0.9230112	1.09473	0.95421875	1.2658764	1.1763778	1.0711067	1.1503358	1.1133708	1.0325111	1.0325111
Phase-1 RCT-163	1.5807789	1.5053674	1.0807766	1.1643916	0.99189293	1.0795559	1.4885808	0.9384584	1.0108673	1.0065954	0.8978221	1.0472928	0.9543068	0.8045759	0.8045759
Phase-1 RCT-108	0.9192273	0.8623694	0.7395043	0.9211564	1.2083029	1.2021775	1.2615505	0.772188	0.9717695	0.7763063	1.1852004	0.7769847	0.7769847	0.7769847	0.7769847
Phase-1 RCT-59	0.7485046	0.8713833	0.5900529	0.7367076	1.0376168	1.5391164	0.7698049	0.847419	0.7698049	0.847419	0.7698049	0.847419	0.7698049	0.847419	0.847419
Phase-1 RCT-192	0.8391752	1.0480027	0.7732517	0.97044307	0.9336173	0.95863366	0.9909128	1.083778	1.083778	1.083778	1.083778	1.083778	1.083778	1.083778	1.083778
Phase-1 RCT-193	0.8403172	1.0278354	1.1472554	1.1336361	1.2602512	1.1587905	0.950974	0.9250437	0.9250437	0.9250437	0.9250437	0.9250437	0.9250437	0.9250437	0.9250437
Acyl-CoA carboxylase	1.0344989	0.68536724	1.0089206	1.0234938	0.9812434	0.8693763	0.85759974	0.8693763	0.8693763	0.8693763	0.8693763	0.8693763	0.8693763	0.8693763	0.8693763
Phase-1 RCT-35	0.9210039	0.8109414	0.8086456	1.0184507	1.1830892	1.1731812	1.0654401	1.0654401	1.0654401	1.0654401	1.0654401	1.0654401	1.0654401	1.0654401	1.0654401
Cystatin C	0.7017978	0.9057317	0.6930772	0.7112947	1.185947	1.0880651	1.0113313	0.8143777	0.8222131	0.8821946	1.0239509	0.9996163	1.2681171	1.0542881	1.0542881
Phase-1 RCT-49	0.3504458	1.0148873	0.8084243	0.9657656	0.98502916	1.041498	1.0148319	1.2372597	1.0180192	1.0418191	1.0274494	1.1963968	1.0274494	1.0274494	1.0274494
Phase-1 RCT-9	0.8268787	1.0417058	0.7326236	0.96023105	1.3985769	0.9493544	1.437824	1.530927	0.4397174	1.5167454	0.97312856	0.7507116	1.4333833	1.3595785	1.3595785
Gad65	1.0368172	0.9307535	0.7326236	0.95197177	0.94230765	1.31363	0.8693835	1.040577	0.8693835	0.8693835	0.8693835	0.8693835	0.8693835	0.8693835	0.8693835
Phase-1 RCT-166	0.8878947	0.8942875	0.8214407	0.9963006	1.1505059	1.1793253	1.042893	1.059009	0.7797022	0.9135772	0.8943885	0.9404533	0.8943885	0.8943885	0.8943885
Collin	0.87555474	1.1894738	1.2282478	1.232546	1.2883893	1.501024	1.0762517	0.9462303	1.0492737	1.0411293	1.0033924	1.0105591	1.0147694	0.8751509	0.8751509
Phase-1 RCT-127	0.9470899	0.96296925	1.016016	1.1130027	0.9127787	1.0809665	1.2140782	1.0530598	0.9860899	1.0058307	0.9860899	1.0058307	0.9860899	1.0058307	1.0058307
Macrophage inflammatory protein-1 alpha	2.225218	1.7505895	1.4021625	1.3478021	1.3000499	1.3000622	1.3687288	1.3687288	0.9140722	0.9784286	1.026463	0.98445134	1.026463	1.026463	1.026463
Zinc finger protein	1.1285974	1.3502263	1.1141754	1.1966648	1.1238501	0.999459	1.0835642	1.0262536	0.9447477	1.0407111	0.98237276	1.053368	0.98237276	1.053368	1.053368
Phase-1 RCT-73	0.8370555	0.9013748	0.9709448	1.1017735	1.0167364	1.0810827	0.84406344	1.268148	0.6483477	0.6585428	0.6846936	0.6852324	0.6846936	0.6852324	0.6852324
Glutathione synthase	0.8873498	1.2370522	0.8423858	0.6985074	1.483116	1.1230886	1.4830889	0.9305507	0.7374078	0.7613725	0.7080977	0.7911043	0.9863389	0.857442	0.857442
CAB-binding protein	1.1058718	1.3071805	1.0817133	1.5210397	0.8165627	0.8226148	0.805507	0.805507	0.805507	0.805507	0.805507	0.805507	0.805507	0.805507	0.805507
Phase-1 RCT-242	1.3971759	1.4273196	1.4594394	1.3769141	0.891236	0.8853963	0.9207312	0.9718036	0.95453844	1.0219473	1.0604969	1.0028012	1.0034884	1.0515954	1.0515954
Phase-1 RCT-60	0.8978464	0.7646827	1.6563217	0.95378237	1.0805078	1.0436599	1.1536056	1.3159021	0.9791168	0.9765573	0.98506	0.98261086	0.9845825	1.1908307	1.1908307
Integrin beta1	1.0449225	1.0948904	0.9376536	1.055515	1.0856451	0.96531007	1.0281152	1.3164912	1.0501166	0.98576555	0.8468959	1.0119903	0.86088744	0.977224	0.977224
Insulin-like growth factor binding protein 5	2.1558366	2.3446257	1.7171338	2.8907754	0.9339778	0.9202838	0.972082	0.972082	0.972082	0.972082	0.972082	0.972082	0.972082	0.972082	0.972082
Phase-1 RCT-59	1.0337437	1.2067604	0.969381	0.9397002	0.7819338	1.091846	1.1853548	0.9736598	0.9685261	0.9685261	0.9685261	0.9685261	0.9685261	0.9685261	0.9685261
Phase-1 RCT-76	0.6824833	0.812173	0.6307002	0.7816933	0.965289	0.9757228	1.0118233	1.043234	1.043234	1.043234	1.043234	1.043234	1.043234	1.043234	1.043234
Ferritin H-chain	0.6263039	0.5233988	0.57093437	0.7751597	0.9407764	0.9177228	0.9773957	1.5070047	0.86272347	0.8290045	0.7812666	0.91810985	0.93681146	0.7949005	0.7949005
Selenoprotein P	0.6425644	0.64052874	1.1781784	0.7751597	0.9407764	0.9177228	0.9773957	1.5070047	0.86272347	0.8290045	0.7812666	0.91810985	0.93681146	0.7949005	0.7949005
PTEN/MAAC	1.046856	0.85666937	0.76591283	0.62322944	0.9303008	0.9091678	0.9773957	1.5070047	0.86272347	0.8290045	0.7812666	0.91810985	0.93681146	0.7949005	0.7949005
Phase-1 RCT-214	1.0708815	1.273834	1.2565428	1.007327	0.716551	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696	0.7279696
Phase-1 RCT-112	1.0157597	1.1415277	0.70435	0.8244341	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966	0.7296966
Thymidylate synthase	1.3518738	1.2803384	1.2807072	1.3412317	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047	0.78032047
Phase-1 RCT-13	1.0942378	0.6537187	1.1548822	0.8002014	1.488406	2.032957	4.4958933	0.60184133	0.868837	1.6271193	1.1980596	0.8241305	1.0822827	1.1942726	1.1942726
Nucleosome assembly protein	0.8846844	0.8544565	0.9650805	0.6028281	0.64432293	1.1037319	0.7618153	0.868837	1.6271193	1.1980596	0.8241305	1.0822827	1.1942726	1.1942726	1.1942726
Cholesterol 7-alpha-hydroxylase (F450 VII)	1.0806594	0.6333873	1.397031	1.3004295	0.5763515	0.9408073	1.031531	0.7244022	0.8114389	0					

Phase-1 RCT-32	1.0511272	0.9655628	1.1237223	0.897476	1.2171838	1.0169158	1.0958854	1.10152	1.4328781	1.0073591	1.0678118	0.6694048	1.1987036
Proteinase assembly factor 1	1.4613767	1.4824561	1.4824561	1.5929677	0.9883534	1.1160519	1.2686284	1.0945307	1.0180646	0.9980234	1.0474739	0.8465681	0.89349673
Exonuclease DNA glycosylase	1.1891489	1.1661803	0.991433	0.7098417	0.84132875	0.8294979	0.86842015	0.974538810	1.015807	0.9513495	1.0248638	0.945156	0.9763333
Phase-1 RCT-42	0.87536347	0.5152602	0.8034263	1	0.9266159	0.847594	0.8226209	0.91330810	0.850552234	0.8787747	1.0112163	0.8645254	0.8782427
Midline P18	0.69585277	1.0761907	1.0761907	0.71633315	0.750396	0.8249091	0.788716	0.903385	0.9330095	1.0240278	1.1547861	0.963614	0.6959863
Phase-1 RCT-184	1.1856117	0.9387046	0.9387046	0.71633315	0.750396	0.8249091	0.788716	0.903385	0.9330095	1.0240278	1.1547861	0.963614	0.6959863
Phase-1 RCT-188	0.8249091	0.9387046	0.9387046	0.71633315	0.750396	0.8249091	0.788716	0.903385	0.9330095	1.0240278	1.1547861	0.963614	0.6959863
Phase-1 RCT-119	1.1744732	1.0144172	0.8104005	0.750396	0.8249091	0.9387046	0.9387046	0.71633315	0.750396	0.8249091	0.9387046	0.9387046	0.71633315
Carbonic anhydrase II	1.3256533	1.3516151	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241	1.0415241
Tryptophan hydroxylase	0.9262803	1.0715241	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803	0.9262803
Phase-1 RCT-179	1.9659631	1.2933291	1.5659357	1.7074089	0.8958972	0.82659376	0.82659376	1.218446	1.024094	1.104744	0.97574437	0.1015768	0.1014638
Phase-1 RCT-140	0.81790715	1.0888162	1.1029839	1.4401608	1.1578542	1.1704141	1.2045261	1.2896822	1.094494	1.104744	0.97574437	0.1015768	0.1014638
Phase-1 RCT-225	1.44759479	1.5049703	1.0220652	0.771519	1.0895588	2.2408903	2.2408903	0.82659376	1.094494	1.104744	0.97574437	0.1015768	0.1014638
Cytochrome P450 2E1	1.7207019	1.6574174	1.2789385	1.5070465	1.1378937	1.265406	2.565162	1.2404894	0.8784782	0.8784782	0.8784782	0.8784782	0.8784782
Thioredoxin-1 (Tlx1)	0.5159885	0.6585885	0.38702793	0.5102024	1.0253559	0.8091115	1.1674082	1.2404894	0.8784782	0.8784782	0.8784782	0.8784782	0.8784782
Carbonic anhydrase III	0.7571603	1.1909785	1.0310173	1.0089441	0.8680645	0.8644045	1.004813	1.056312	1.1833537	1.011678	1.0751779	1.0859802	1.1375909
Phase-1 RCT-140	0.36980265	0.4155075	0.5831223	0.5538358	0.9059109	0.950109	1.0313455	1.0395955	0.9752843	0.9752843	0.9752843	0.9752843	0.9752843
Complement component C3	1.2558228	0.5739347	0.1919665	1.115394	0.8668384	1.0640774	0.950109	1.0463102	0.9381034	1.0460777	0.7858104	1.0576457	0.9929304
Galectinase	1.1628283	0.9367258	1.0471235	0.6689792	1.0640774	0.8714634	1.0463102	1.055452	1.244917	1.2218814	1.0305682	1.209624	1.069516
Phase-1 RCT-173	1.645813	1.8186682	1.859546	2.7354394	1.3284323	1.0669152	1.2074528	1.105452	0.9064109	0.7623416	0.8885903	1.0222668	0.934812
3-methylglutamate DNA glycosylase	0.9540434	1.1317789	1.2228757	1.4286439	1.1213188	0.9700915	1.0259897	0.7812152	0.8352844	0.7808923	0.9406787	0.71270748	0.8502403
Protonic acid functional enzyme type II	0.6894598	0.70607597	0.8084265	0.6748057	1.1213188	0.9700915	1.0259897	0.7812152	0.8352844	0.7808923	0.9406787	0.71270748	0.8502403
Phase-1 RCT-40	0.4371487	0.5167382	0.98713577	0.77026006	1.1213188	0.9700915	1.0259897	0.7812152	0.8352844	0.7808923	0.9406787	0.71270748	0.8502403
Sensory marker protein-30	1.660185	1.4946433	1.5336025	2.3144493	0.84546767	0.98702335	1.2621697	1.1222235	0.95068824	0.8737901	1.3423421	0.9586415	1.109604
Cyclin G	0.87776854	1.0078892	0.9737937	1.1212779	1.0568019	1.0035515	1.5497603	1.1222235	0.95068824	0.8737901	1.3423421	0.9586415	1.109604
Membrane-associated antigen ME491	1.3795416	1.4797301	1.2228698	0.5759933	0.8482971	1.0093744	1.0963691	1.0511054	0.9696796	0.9372432	1.0074894	0.94894075	0.953351
Phase-1 RCT-28	1.128517	1.3627031	0.968475	0.8552357	1.0458349	1.098714	1.0963691	1.0511054	0.9696796	0.9372432	1.0074894	0.94894075	0.953351
Engrin	0.72294414	0.6951037	0.968475	0.8552357	1.0458349	1.098714	1.0963691	1.0511054	0.9696796	0.9372432	1.0074894	0.94894075	0.953351
Alcohol dehydrogenase 1	1.59282516	1.0954882	0.9289839	0.8160577	1.0106875	0.9324433	0.9274468	0.9444885	1.0127119	0.8433593	0.95860357	0.8680965	0.67500725
Stem cell factor	0.7902209	0.6799138	0.6731245	0.6157246	1.0626	0.841167	0.8335675	0.8742356	0.8109385	0.6338058	0.727278	0.8628008	0.8628008
Protein tyrosine phosphatase alpha	0.5174308	0.8195913	1.155964	0.948674	0.66492785	0.9517861	0.9216157	0.88915267	1.0950248	0.8050588	1.000762	0.8863564	0.8716216
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.8896522	0.79737884	0.72202943	0.67407845	1.025634	0.6754524	0.7020023	0.9851498	0.9814958	0.8040724	1.0063313	0.5559277	0.5382698
DNA topoisomerase I	1.0299921	1.0263124	0.9602291	0.74899135	0.895974	1.0292977	1.303067	1.0093574	1.0416936	0.9053045	0.9579884	0.807369	1.0252639
Phase-1 RCT-280	1.0315026	1.2036241	0.9602291	0.74899135	0.895974	1.0292977	1.303067	1.0093574	1.0416936	0.9053045	0.9579884	0.807369	1.0252639
Superoxide dismutase Mn	1.2597079	2.015382	1.743705	1.7845248	1.2701181	1.45596	1.2612162	1.1443678	1.5627121	1.3352387	1.2407404	0.9509026	0.7458037
Beta-tubulin, class I	0.5209038	0.47992262	0.3596728	0.3017372	0.85424685	0.9651608	0.8407728	0.9543038	0.8407728	0.56213055	0.8407728	0.8316368	0.8376135
Carbamoyl phosphate synthetase I	1.2564012	0.97581005	0.8749867	0.9345837	0.7653656	0.9611178	1.1033207	0.999477	0.9094325	0.8884314	0.74814954	0.8316368	0.8376135
Diacylglycerol kinase zeta	0.84023505	0.95568384	1.0894389	1.3393389	0.856959	1.0321003	1.183963	0.8871122	0.9633621	0.9874005	0.948603	0.8316368	0.8376135
Phase-1 RCT-141	1.3138482	1.7261057	1.0024441	1.6705579	1.4222497	1.2357888	1.2314328	1.4446098	1.160663	1.0961487	1.005734	1.2140929	0.9284404
14-3-3 zeta	0.7858456	0.85103357	1.5661556	1.3962433	0.8654911	0.6377894	0.7518699	0.8415776	1.0166377	0.9782881	0.7695926	0.7695926	0.7695926
Gammacellin, cyclophilic	0.7858456	0.85103357	1.5661556	1.3962433	0.8654911	0.6377894	0.7518699	0.8415776	1.0166377	0.9782881	0.7695926	0.7695926	0.7695926
Ribosomal protein L13A	1.0758667	0.6010889	0.4014899	0.38075797	1.1542389	0.990426	1.0301106	1.2420413	0.9743574	1.0001268	1.0353776	1.091285	0.7695926
IRB-a	0.7557358	0.6205574	1.0262741	0.2691102	0.8000724	0.9124675	1.0652965	1.0052284	1.0641862	1.068392	1.0900856	0.8272472	0.8272472
c-Jun	1.5606412	1.6319388	1.7008042	1.5895191	0.8105295	0.8293938	0.7547137	1.005337	0.8332414	0.8547556	0.8272472	1.520916	1.0681368
Protein O-mannosyltransferase 1 (Pom1)	2.8068133	4.3035164	3.3481505	3.759344	0.9387944	0.9540674	0.87524647	1.2648683	0.933418	0.915508	0.9485145	1.293076	1.0885079
HMG CoA reductase	1.6412959	2.442434	1.2624868	1.2651873	1.5076128	1.0714695	1.4903183	1.1832868	1.1738442	1.043302	1.207909	1.0340446	1.2536343
Phase-1 RCT-12	1.1590636	1.7441276	1.2831824	1.5799644	1.100193	1.1354558	1.1432686	1.1356649	1.3972198	1.4572652	1.186203	0.9665174	0.854423
Interferon related developmental regulator (FRD1 (PC4))	0.89168857	0.6593012	0.7989874	0.78255325	1.1047945	0.98723567	1.2683137	1.0433071	1.216587	1.011693	0.9902828	1.4182678	1.2900181
Glucose-regulated protein 78	0.441709554	0.39826566	0.6589588	0.45361066	1.4461757	1.3957707	1.8874586	1.7959601	1.2088242	1.1835718	0.895558	0.8719465	0.8515407
3-hydroxyisovaleryl dehydrogenase (HSD3B1)	0.8232995	1.0041775	0.7312999	0.6801865	1.2633957	0.95746785	0.93856215	1.015187	1.0382729	0.9560663	0.93059	0.8881743	0.85947895
Caspase 6	1.3780744	1.064221	1.1083107	1.0655666	0.8604817	0.9374215	1.1174734	1.828164	0.9262119	0.8895961	0.90946394	0.9691556	1.086217
Phase-1 RCT-189	0.84223104	0.8353925	0.91748946	1.1174746	1.18112	0.9039318	0.9241134	0.9035356	0.8587769	0.8587769	0.8587769	0.8587769	0.8587769
Phase-1 RCT-187	1.103641	0.9901083	0.8860568	1.0120423	0.9328422	0.9007457	1.0202954	0.98604095	0.968273	0.8798428	0.8983957	1.12448	1.0196389
Phase-1 RCT-34	0.66887206	0.51403214	1.1975708	0.83273893	1.6537018	1.5218947	1.308671	1.0601436	1.0462052	1.1478174	1.0504084	0.8275412	1.0151272

Table 28

Phase-1 RCT-172	1.004445	0.48024562	1.2692431	1.4523392	0.8217702	0.6169432	0.8034726	0.9441825	1.3333243	1.2053462	0.9557113	0.9778121	0.8497456
Protein kinase, muscle	1.204655	1.027803	1.567251	1.004435	1.044335	0.9655985	1.004435	1.044335	1.05203	1.0301534	0.8949154	1.0208664	1.1910095
Phase-1 RCT-186	0.4811328	0.5201436	0.2976222	0.305065	1.258472	1.1555527	1.258472	1.1555527	0.90044993	0.83328162	1.0228655	1.0742836	0.876385
Phase-1 RCT-190	1.2520242	0.7671316	1.170751	1.36372	1.1755552	1.061162	0.7532325	1.250275	0.8269857	0.94305164	1.0178599	0.9771935	0.98120916
Cytochrome P450 2C9 (alternate clone 2)	0.6644709	0.9182387	0.7994949	0.9007326	0.6569207	0.6285949	0.6984335	0.5221688	0.9136656	1.3575007	0.69450235	0.8587213	0.9597223
Phase-1 RCT-260	0.6768853	0.6564487	0.5544812	0.7471816	0.9804501	0.6442230	0.5621688	0.7521688	0.7601612	0.9459555	0.8578922	1.351873	1.0092321
Phase-1 RCT-261	3.4624605	4.0182724	2.0356105	1.2287154	1.2211367	1.2287154	1.2211367	1.2287154	1.1253541	0.69680963	0.8872018	1.053375	1.033328
Methyl-CoA racemase alpha	0.6259862	0.9074955	0.9074955	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905	0.5258905
Cytochrome P450 1A2	0.8959948	0.9404797	1.9271454	1.1543612	0.8149432	0.9973378	0.8717357	0.8149432	0.9973378	0.8717357	0.8149432	0.9973378	0.8717357
Phase-1 RCT-297	0.6353534	0.823006	0.3591449	0.5237262	1.0817604	1.0271547	0.8593398	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098
Monomeric oxidase B	0.6312524	0.4972157	0.7602332	0.6128414	1.1743271	1.0924982	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098
Phase-1 RCT-284	2.0147614	1.3740038	0.7953365	0.65503407	0.7609161	0.7609161	0.7609161	0.7609161	0.7609161	0.7609161	0.7609161	0.7609161	0.7609161
Perforin/profiling activated receptor gamma	0.9070878	0.9464901	1.9271454	1.1543612	0.8149432	0.9973378	0.8593398	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098	0.9554098
Phase-1 RCT-143	0.8236306	1.3676528	1.3620075	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843
Phase-1 RCT-251	1.513898	0.9410278	1.568431	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366
Phase-1 RCT-117	0.8236306	1.3676528	1.3620075	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843
Glutathione S-transferase beta-1	1.513898	0.9410278	1.568431	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366	0.8718843	1.121366
Phase-1 RCT-41	0.8433368	1.144511	0.662682	0.820935	0.9242827	0.9138054	0.9242827	0.9138054	0.9242827	0.9138054	0.9242827	0.9138054	0.9242827
Phase-1 RCT-148	0.7616595	0.8782475	0.8051037	0.8051037	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517
Phase-1 RCT-142	1.4842508	1.2500588	0.7529257	0.8051037	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517	1.087517
Activin receptor type II	1.0933883	0.9633846	0.94271516	0.8694176	1.1787902	0.9971612	0.8694176	1.1787902	0.9971612	0.8694176	1.1787902	0.9971612	0.8694176
Glycine methyltransferase	0.8991018	1.0037649	0.7389951	0.8511354	1.0517255	1.196652	0.742138	1.2942353	0.8603394	0.8603394	0.8603394	0.8603394	0.8603394
Phase-1 RCT-281	1.0285549	1.0201093	1.1713341	1.1911759	0.8493797	0.8587716	0.97644734	0.92297656	0.8804871	0.973984	0.95888524	0.92297656	0.8804871
Ciliary neurotrophic factor	1.0817757	1.501282	0.9252159	1.5182887	0.8523323	0.75418764	0.8922833	0.8490056	1.1765048	0.85126485	1.0801788	0.8523323	0.8490056
Gap junction membrane channel protein beta 1 (Gh1)	1.1765446	1.0340574	0.907828	0.8321876	0.8508096	1.015947	0.8916253	1.2542443	0.9628474	1.0544349	0.84178436	1.015947	0.8916253
Phase-1 RCT-96	0.94643916	1.1081768	1.0800303	0.91510206	1.2305877	1.1143019	1.1611038	0.9755294	0.8742474	0.8976534	0.8742474	0.8976534	0.8742474
Phase-1 RCT-207	0.6748093	0.71058196	0.7897046	0.5213294	1.3006357	1.1587769	1.4048824	1.099251	0.9529294	1.2015621	1.0039735	1.3129021	1.0954108
Retinol-binding protein (RBP)	0.65543437	0.87748605	0.7242827	0.8311294	1.0094128	0.9236221	1.0433558	1.079841	0.9065646	0.8080562	0.7618183	0.78474104	0.9016081
Very long-chain acyl-CoA synthetase	0.7248927	0.7331303	0.96426314	0.5911736	1.1573275	1.17491165	1.186245	1.2165044	1.0414625	1.0414625	1.0414625	1.0414625	1.0414625
Synuclein-1	0.7928198	0.9445125	0.8946956	0.9458119	0.9803015	0.9803015	0.9803015	0.9803015	0.9803015	0.9803015	0.9803015	0.9803015	0.9803015
Salivary	0.9787031	1.2005498	1.0518095	1.2005498	1.0518095	1.2005498	1.0518095	1.2005498	1.0518095	1.2005498	1.0518095	1.2005498	1.0518095
Phase-1 RCT-145	0.6533988	0.8354813	0.4635883	0.55267817	1.1136151	1.0307946	0.8607587	1.0247653	1.0585568	0.83536637	1.0573871	1.0247653	1.0585568
Adin	0.8607467	0.8221394	0.72121243	0.55267817	1.1136151	1.0307946	0.8607587	1.0247653	1.0585568	0.83536637	1.0573871	1.0247653	1.0585568
Phase-1 RCT-49	0.4059532	0.4573503	0.7813594	0.708684	0.97800183	0.8150465	1.0012864	0.90252475	0.9633746	0.923159	0.9708613	1.0012864	0.90252475
Sarcoplasmic reticulum calcium ATPase	0.8336273	0.7706865	0.5716918	0.95470357	0.8112775	0.781018	0.7512765	1.0257135	0.9677135	0.87405163	0.83318664	0.7777333	0.9227148
Alpha-2-macroglobulin, sequence A2	1.1313006	1.2013448	1.0251052	1.2975956	0.8695037	1.0167119	1.082109	1.0024334	0.9796972	1.0453266	1.1033118	0.92694265	1.0444176
Phase-1 RCT-204	1.0817757	1.0452117	0.44816706	0.8529263	1.0655577	0.9852476	1.0886787	1.1356523	1.0042811	0.9856986	1.066563	1.123131	1.0402889
Vascular endothelial growth factor	0.63121865	1.0289357	0.8029274	0.7760947	1.2033482	1.2194312	1.0507338	0.9435947	1.1168	0.8944763	1.031399	0.852132	0.75872584
NADP-dependent isocitrate dehydrogenase, cytosolic	0.8733835	0.6309607	0.8427165	1.3291136	1.1796321	1.2150329	1.6910837	1.2588832	0.9999597	0.8586028	0.82494915	0.8730228	0.5301281
DNA binding protein inhibitor ID2	0.62652816	0.5742738	0.3086859	0.3384722	2.0397813	1.4118912	1.595985	1.427603	2.2063316	1.3711326	1.279878	2.2685872	1.7635582
Glutathione S-transferase Ya	1.0633128	0.6799889	1.1345613	0.72589135	1.3642807	0.67575605	0.20785289	1.8112524	0.9577684	0.3197622	0.5255397	0.9745987	0.9624238
Enolase bryonase	0.482073	0.6794755	0.5825745	0.4881767	1.0623946	1.1509728	0.985795	0.7844418	1.3930153	1.1205053	1.218578	1.1247779	0.8878972
Insulin-like growth factor I	2.6919777	2.1067755	2.818956	1.8140781	0.9182323	0.97326165	1.3476879	1.0188068	1.1057668	1.4804024	0.8834739	1.1742477	0.9510802
Prostaglandin H synthase	1.0303587	1.2238114	1.1451194	1.0553849	1.1928558	1.0819916	1.3376527	0.95869375	0.95869375	0.95869375	0.95869375	0.95869375	0.95869375
Phase-1 RCT-138	0.5959025	0.6146055	0.3675566	0.5137268	0.662675	1.1266751	1.087291	0.8746715	1.0245737	0.9739157	0.94681124	0.86049753	1.2234038
Phase-1 RCT-137	0.38026	1.138457	0.7937272	0.9830235	0.98401367	1.0520701	0.7028292	0.8655941	1.1015581	0.97515446	1.1984114	0.86049753	1.2234038
Phase-1 RCT-136	0.5959025	0.6146055	0.3675566	0.5137268	0.662675	1.1266751	1.087291	0.8746715	1.0245737	0.9739157	0.94681124	0.86049753	1.2234038
Phase-1 RCT-135	0.38026	1.138457	0.7937272	0.9830235	0.98401367	1.0520701	0.7028292	0.8655941	1.1015581	0.97515446	1.1984114	0.86049753	1.2234038
Phase-1 RCT-134	0.5959025	0.6146055	0.3675566	0.5137268	0.662675	1.1266751	1.087291	0.8746715	1.0245737	0.9739157	0.94681124	0.86049753	1.2234038
Hepatic lipase	0.5946853	0.6043494	0.5872713	0.9823227	1.3775314	1.3828396	1.0431303	0.8607633	0.81202036	0.96140003	0.75981124	0.86049753	1.2234038
Phase-1 RCT-164	1.2334721	1.2401283	0.9120306	0.8923227	1.3775314	1.3828396	1.0431303	0.8607633	0.81202036	0.96140003	0.75981124	0.86049753	1.2234038
Acyl-CoA dehydrogenase, medium chain	0.6677019	0.712811	0.775442	0.5165029	1.002022	1.042547	0.908038	1.0607411	1.1197267	1.1671416	1.0067257	0.9833507	1.080747
Glutathione S-transferase Yb2 subunit	1.2352545	1.5200619	1.6568352	1.1825914	1.4411754	1.102515	1.200458	1.650104	1.2228411	1.650104	1.2228411	1.650104	1.2228411
Carbonyl reductase	2.2845058	1.6922746	1.3936544	1.675231	1.2743556	1.4713197	1.3244677	1.3244677	1.3244677	1.3244677	1.3244677	1.3244677	1.3244677
Phase-1 RCT-168	1.0755028	1.204867	1.6565117	0.979434	1.9978172	1.4338171	0.8331493	0.88845336	0.9287174	0.935143074	0.7716432	0.6078976	0.9711934
Apolipoprotein E	0.48026558	0.28743702	0.459633	0.5707555	1.1083245	0.729125	1.2133959	1.8311223	1.0265228	0.8709694	0.7716432	0.6078976	0.9711934
Phase-1 RCT-169	0.7639052	0.61743116	0.5620318	0.6427352	1.0394063	0.89634866	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593
UDP-glucuronosyltransferase P1	1.2373914	1.2270758	2.6718326	1.065209	1.430273	1.2690251	1.2690251	1.2690251	1.2690251	1.2690251	1.2690251	1.2690251	1.2690251
Glutathione S-transferase P1	0.67108405	0.6170873	0.6620318	0.6427352	1.0394063	0.89634866	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593	1.1638593
Disulfide isomerase related protein (ERp72)	0.798401636	0.62578046	0.56810678	1.2610678	1.4211163	1.2610678	1.2610678	1.2610678	1.2610678	1.2610678	1.2610678	1.2610678	1.2610678
Ribosomal protein L13	0.8332815	0.5745426	0.732463	0.6338974	1.1174436	1.405273	0.7385888	0.8684725	0.8746882	0.9586974	1.0817215	0.9644852	0.8515633
Ceruloplasmin	0.8005898	0.87											

Phase-1 RCT-3	1.262346	1.3585153	0.9983707	1.280729	0.8878507	0.9565361	0.9730435	0.9155775	0.9072259	0.9774432	0.892228	1.0548735	0.9872836	0.9153502
Felin beta (Felin)	0.680045	0.76015824	0.862461	1.3576102	1.3277674	1.485405	1.36231	1.25688	1.0442678	1.2774655	0.9411764	0.9813339	1.247727	0.98342736
3-hydroxyisobutyrate dehydrogenase	0.7359413	0.6118841	0.8764586	0.9769811	1.0510501	1.06331	0.9653453	0.9736545	0.8996145	0.9417648	0.9617483	1.10117	0.98342736	0.98342736
Carbonic anhydrase III, sequence 2	0.6906189	0.6300016	0.8417729	0.5940038	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869	1.0262869
Phase-1 RCT-10	0.6156141	0.6590483	0.75309845	0.6914038	1.1270001	1.0537101	1.0883368	1.0883368	1.0883368	1.0883368	1.0883368	1.0883368	1.0883368	1.0883368
Alpha-2-microglobulin	0.47982398	0.4273937	0.2478357	0.36183356	1.5072446	1.1688781	1.340989	1.0243412	0.9392428	0.9079758	0.8917653	1.156409	1.0243412	0.9392428
Dynamin-1 (D100)	0.98905843	1.0061865	0.5450002	0.6571203	0.8978789	1.1653233	0.9324285	0.9272785	0.9324285	0.9324285	0.9324285	0.9324285	0.9324285	0.9324285
Lysozyme	1.8440089	0.89042175	1.1548314	1.3317417	0.8189888	0.9554447	0.9272785	0.9272785	0.9272785	0.9272785	0.9272785	0.9272785	0.9272785	0.9272785
Phase-1 RCT-252	0.52398403	0.571209	0.3312072	0.3181222	0.8812636	0.9765232	0.9571817	0.9290525	0.9571817	0.9290525	0.9571817	0.9290525	0.9571817	0.9290525
Phase-1 RCT-278	1.1956046	1.3636318	1.0650781	1.44911	0.96884706	1.0310415	1.2673336	0.8975808	1.2673336	0.8975808	1.2673336	0.8975808	1.2673336	0.8975808
Phase-1 RCT-42	1.15392	1.3758753	1.0672113	1.2025443	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538	1.1894538
Phase-1 RCT-25	0.8642038	0.975137	1.235784	1.1855972	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749	1.0478749
Phytochrome P450 2011	1.1440213	1.4682022	1.4283444	1.5914791	1.193878	1.075937	0.9075197	0.8423465	0.9075197	0.8423465	0.9075197	0.8423465	0.9075197	0.8423465
Complement factor I (CFI)	1.2017257	1.0056887	1.6071887	1.2149335	1.109658	1.230331	1.033723	0.8423465	1.033723	0.8423465	1.033723	0.8423465	1.033723	0.8423465
Proliferating cell nuclear antigen gene	1.3891848	0.96045068	1.341481	0.9503624	1.0171591	1.0910658	0.994637	1.0910658	0.994637	1.0910658	0.994637	1.0910658	0.994637	1.0910658
Activating transcription factor 3	2.2322688	2.350112	1.6404048	1.2147068	1.2879127	1.6520657	1.4774483	1.3503368	1.065824	0.9287656	1.0418247	1.0071753	1.009655	0.9193827
Focal adhesion kinase (p125FAK)	1.0320184	0.9634468	0.9552978	1.004082	0.844397	0.9575238	1.0451201	0.9839769	1.0359584	0.9909594	1.0359584	0.9909594	1.0359584	0.9909594
Phase-1 RCT-269	0.791154	1.0177592	0.6327985	0.660202	1.1613065	0.9651786	0.9535328	1.0071844	0.9535328	1.0071844	0.9535328	1.0071844	0.9535328	1.0071844
Phase-1 RCT-269	0.92008275	1.1862891	1.0940374	1.586587	0.9082191	0.978485	1.0521483	0.9758684	0.95347216	0.9758684	0.95347216	0.9758684	0.95347216	0.9758684
Iron-responsive element-binding protein	4.330818	7.945628	2.1271622	4.445193	1.3688476	1.3390242	1.1774933	1.3408302	1.2771902	1.2196538	1.2455714	1.0230068	1.1611635	0.88180258
MHC class I antigen RT1.A10 alpha-chain	0.69005576	0.4076282	0.4845466	0.4339668	1.0396125	0.93231267	0.6733683	0.57278786	0.6655465	0.6593314	0.71722126	0.7744424	1.0230068	0.88180258
24H sulfatase	0.65388108	0.94320905	0.7741941	0.8123475	1.4884051	1.3013288	1.6597757	1.1734521	0.9601462	0.9562914	0.9562914	0.9562914	0.9562914	0.9562914
Phase-1 RCT-111	0.854317	0.8038514	0.5434355	0.6076486	1.2102597	1.0391792	0.90202514	0.9761489	1.0063341	0.92220216	0.9562914	1.1040738	0.9597936	0.8235101
Phase-1 RCT-270	0.63035	0.8534873	0.6133242	0.652771	0.955252	0.7021751	0.9167168	0.926881	0.9112636	0.926881	0.9112636	0.926881	0.9112636	0.926881
Colony-stimulating factor-1	0.92059405	0.6981185	0.8334828	0.9374054	1.050169	1.0203954	1.1310911	1.045715	0.9567845	0.9567845	0.9567845	0.9567845	0.9567845	0.9567845
N-cadherin	1.5507884	1.240953	1.455272	0.8623747	1.050051	1.003398	2.1894891	1.0964545	1.0150167	0.89776394	0.8425026	0.9427761	0.9563306	0.9259454
Phase-1 RCT-82	0.74980414	0.8164732	0.8003547	0.9185363	2.077358	1.8037389	2.1894891	1.0964545	1.0150167	0.89776394	0.8425026	0.9427761	0.9563306	0.9259454
Phase-1 RCT-22	1.048969	1.1033782	1.2006392	1.1253142	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375
AT-3	0.9537786	1.074381	1.067378	1.1821375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375	0.7742375
Phase-1 RCT-18	0.9659601	1.2079889	0.99119014	1.0874424	0.9343465	0.7065396	1.0495493	0.9390427	0.9714888	1.0018218	0.9665871	1.0033306	0.910212	0.8933427
Phase-1 RCT-123	1.0553668	1.214826	1.013874	1.356416	0.9727546	1.0026866	1.0495493	0.9390427	0.9714888	1.0018218	0.9665871	1.0033306	0.910212	0.8933427
Phase-1 RCT-56	0.6240297	0.9235355	0.5691347	0.6795583	1.029664	0.932807895	0.93584347	1.1538245	0.9167308	1.110923	1.192831	0.93195254	0.8019318	0.6583354
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.8096347	0.97634417	0.509055	0.7727871	1.1759665	0.9044288	0.91685203	0.83463824	1.0111387	0.8059216	1.1103446	1.0088708	0.9351787	0.9187157
Glucose transporter 2	1.0452044	0.61668954	0.8643968	0.5052842	0.8831169	0.93231225	0.90271485	1.1677964	0.71346786	0.7797424	0.9651485	1.0344114	1.0562532	0.9652532
Multidrug resistant protein-2	1.5835918	0.987923	1.7852443	1.545482	0.8404755	1.2027162	1.017589	1.3317989	1.0422657	1.1069646	0.9925552	1.4507631	1.2976723	1.584338
Multidrug resistant protein-1	2.107254	1.3304681	2.0119857	1.787616	0.85703707	1.1743425	1.2568201	1.113274	1.2253904	1.0757436	1.195498	1.1915085	1.5021429	1.5021429
Phosphorylcholine-binding protein	2.588446	3.4122664	2.591489	2.450717	1.2467599	1.2396309	0.98743284	1.0897789	1.2844477	1.0533003	1.1578486	1.0885785	1.0740038	1.1720525
Phase-1 RCT-180	1.2442576	1.8752867	1.7573256	1.5527828	1.1892739	1.2246317	1.3797693	1.13168	1.2689193	1.0855484	1.007344	1.0326664	1.4301184	1.4301184
Integrin beta-4	2.201333	1.9904558	1.960502	1.515522	0.5927684	0.63502154	0.6781131	0.8263338	0.835719	1.0730983	0.9784935	0.9379245	0.8768497	0.97381276
NADPH cytochrome P450 oxidoreductase	3.349488	3.8748348	2.5883364	3.514393	0.9921904	1.0283495	1.2781168	1.175575	1.2379413	1.2126888	1.116598	1.8814887	1.2672957	1.9575386
Wait	1.6312868	1.382933	0.9294205	1.456384	0.6355077	0.909654	0.74837554	0.8593713	0.9157915	0.9308866	0.9684678	1.430768	1.0287947	1.0288082
Endogenous retroviral sequence, 5' and 3' LTR	1.4885308	1.1910371	0.8244169	0.8242029	1.3940241	1.5782204	1.7920287	1.286541	1.0274132	0.5302188	0.8021252	0.54440546	0.6358585	0.5322368
Phase-1 RCT-53	0.66175187	0.995054	0.65873926	0.8068006	1.1176411	1.0582799	1.0201925	1.020881	0.9684724	1.0024872	0.9784785	0.913395	0.9755027	0.9755027
Phase-1 RCT-54	1.0145985	1.2603684	0.8430095	1.0306053	1.037418	0.9611453	0.9876865	0.9416247	0.9655153	0.9792042	0.9549526	0.9310891	0.9796863	0.931577
Phase-1 RCT-240	0.847189	0.9263541	0.7915419	0.8227765	0.94065446	0.88664037	0.9486939	0.96496207	0.9676935	1.072488	0.9300326	1.0891448	0.9214785	0.9375821
Osteopontin	0.65684446	0.76538825	0.40623417	0.8038479	1.1092268	0.9284121	0.9459456	0.8915704	1.0448848	0.92287638	1.0750353	0.92843515	0.9116388	1.0324789
Organic anion transporting polypeptide 1	1.4228727	1.1095126	1.429187	0.7437346	1.2391324	1.0082593	0.8375205	0.8423517	0.9898604	1.4507001	0.941294	1.138879	0.9797114	0.988771
Phase-1 RCT-241	1.1017247	0.87139565	1.0286574	1.1100975	1.0174702	0.9474676	1.2046441	1.0035459	0.9715259	1.1826853	0.9844238	1.159342	0.9808814	1.0538955
Tissue factor pathway inhibitor	1.3838491	1.3438711	1.1046622	1.1458532	1.015161	1.155245	0.8668738	0.8668738	0.8668738	0.8668738	0.8668738	0.8668738	0.8668738	0.8668738
Cyclin-dependent kinase 4 inhibitor p27kip1 (cyclin D)	0.8233007	0.75960414	1.1116894	0.4982658	0.88942823	0.9230681	0.7541781	1.0502292	1.2400888	0.9763734	1.1464885	1.0612297	0.8926288	0.89941497
Phase-1 RCT-59	0.85136217	0.97487944	0.86841093	0.989568	1.0776335	1.00733	0.9079878	1.4427266	0.9229092	0.950438	1.0091866	0.845316	0.8109726	0.60854167
Phase-1 RCT-258	0.9514102	0.9407758	1.108047	0.8953546	1.076936	1.193535	1.282198	1.051434	0.89972636	0.9313848	0.9462715	0.9896789	1.765604	1.765604
Phase-1 RCT-113	0.974704	1.3809446	0.9730096	1.3259488	0.9797383	1.142819	0.9676781	0.898	1.0236105	0.9403292	1.2108859	1.0208243	1.0435847	1.0435847
Adenosine nucleoside translocator 1	0.91732484	0.82730113	0.8888891	0.8325165	0.7981484	0.8075935	0.826367	1.037868	0.751033	0.8372226	0.8081164	0.9534563	1.0131316	1.0778389
Alpha-1 acid glycoprotein	0.6509331	0.6073316	0.23015896	0.6213747	1.341878	1.349547	1.0290872	0.708566	0.78193784	0.8811258	0.9440592	1.985146	1.8845423	1.2261888
MHC class II antigen RT1.B-1 beta-chain	1.1009480	1.0223901	1.060913	0.9600432	1.0011101	0.65904908	0.4671045	0.6278452	0.9755576	0.5134073	0.5402661	0.9742558	0.735004	0.735004

Table 28

Organic cation transporter 3	0.68554894	0.7277667	0.57789745	0.8204596	1.177176	1.168022	1.4122303	1.0411382	0.944313	1.1208323	0.9772521	0.82588513	0.78140414	1.1008979
Hypoxia-inducible factor 1 alpha	1.3811337	0.8180661	1.1214864	0.73088825	0.9880797	0.8882411	0.77193383	1.2383857	1.0116837	1.0164053	1.0438449	1.0584939	1.0261622	0.8147187
Phase-1 RCT-43	0.9428714	1.0764464	0.7765245	0.30752745	1.1442614	1.156794	1.0031189	1.1584151	0.8174691	0.85288844	0.7830489	0.95857174	0.8278004	0.8224169
Phase-1 RCT-45	0.8051843	1.126388	0.8944705	0.81683004	1.0509718	1.1557284	0.8141105	1.0407311	0.92203754	0.97102836	0.877699	1.0074423	0.95933234	0.9042866
Malate dehydrogenase, cytosolic	0.7645378	0.77004236	1.0912955	0.7828886	1.1821392	1.306876	1.2460466	0.9046779	0.98781437	1.0121143	1.0856534	0.8557958	1.1306895	1.2515558
VL30 element	0.9055491	0.8257926	0.6546513	0.47086278	1.3616395	2.307872	2.8532068	1.897772	1.3495748	0.7682107	0.86744267	0.2205384	0.5697273	0.4995103
Phase-1 RCT-189	0.6465153	0.7383068	0.87419185	0.43758273	1.3345271	1.3831219	0.927601	0.9132508	1.4108131	1.0343769	1.3175889	1.2864108	1.2545462	1.214932
Alpha-fetoprotein	0.7962147	0.72049004	0.8540148	0.80702328	0.8944751	0.87947595	1.0094959	0.9539669	0.871577	1.0031041	0.8300372	1.0144621	0.87764144	1.1263125
Calgranulin B	0.63317317	0.55597438	1.2319995	0.5712426	1.1410139	1.0056098	0.8134155	0.9623921	1.0310227	1.2100357	1.1849118	1.028953	1.2354156	1.0545167
Tissue plasminogen activator	0.97943986	0.7169507	1.0620296	1.0563987	1.1009556	1.0455485	1.0817153	1.0141226	1.0714087	1.0357445	1.0286754	1.0918027	0.92757964	0.96517295
Phase-1 RCT-195	0.73934406	0.5907861	1.106229	0.66819457	0.924049	1.0090712	0.836307	1.0145442	1.025849	0.9247297	0.8904101	0.85322427	1.1485465	1.1178883
Liver fatty acid binding protein	0.45373502	0.5824366	0.28161848	0.40439443	0.8947623	0.8444495	1.0373129	0.9518979	1.1171183	1.0117392	0.9133723	0.9235354	0.6884979	0.83044034
Alpha-1 microglobulin/bikunin precursor (AmBp)	0.88030976	0.7851071	1.3181418	1.0382215	1.181173	1.1730818	1.1417236	0.9590226	1.1908444	1.034152	1.1595669	0.89711905	1.2380564	1.3006922
Phase-1 RCT-194	1.2559074	1.3753184	1.4836444	1.090705	0.8101049	0.8653188	0.8317578	0.91231485	0.9124246	0.93131884	1.0316078	0.89416878	0.970854	0.940107
Phase-1 RCT-161	1.0952965	1.3243518	1.2579085	1.5136884	1.1128789	1.0685163	1.0987273	0.9262174	1.0607349	0.9494041	1.0091954	0.9013015	0.9069502	1.0118625
Phase-1 RCT-188	1.3882629	1.4590089	1.1718903	1.7782407	0.8271152	0.9441873	0.95172364	1.1051103	0.97053076	1.0444762	0.9801289	1.163866	1.0786289	1.020813
Phase-1 RCT-221	0.866753	0.97916993	0.7351127	1.266469	1.149895	1.1092149	1.2413983	1.1519844	1.1374173	0.9908309	1.0092374	1.1652727	0.8120102	0.9507652
Phase-1 RCT-235	0.6973359	0.8710761	0.55318184	0.5381737	0.99378085	1.0552432	1.091417	1.3451985	0.9308853	0.8195172	0.7955278	0.9630857	0.75105083	0.77638406
Organic anion transporter 3	0.9515091	0.8080774	1.0390791	0.7446124	1.2761682	0.79709184	0.8444276	0.72139408	0.91021734	1.1722893	0.92010754	1.1197848	1.3231108	1.005603
Matrix metalloproteinase-1	0.78346586	0.87704034	0.66327715	0.964018	0.87659834	1.6129212	0.8481766	1.5638362	0.88822474	0.61320807	0.83509268	0.95750326	0.8918538	1.035768
Ureapex protein 2 precursor	0.39163977	0.4527652	0.17533506	0.28704858	1.1325573	0.83482953	0.99984737	0.76060677	1.0598806	0.70407858	0.74393229	0.84426564	0.7618801	0.6387593
Phase-1 RCT-212	1.073952	1.2615035	0.6664614	0.88406434	0.97652584	1.0290979	0.9800404	0.9021106	0.83428825	0.95322807	1.0466273	0.8778644	0.9374952	1.068466

(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 h: yes=ncr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed

(5) Predictive gene (as in Table 18 and as included in Table 26)

Table 28

Table 26. Expression Data for 6 Hour Timepoint (1)													
Compound/Dose (2)	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20	PHEN 20
Animal Number (3)	1321	1322	1323	1331	1332	1333	141	142	143	21	22	23	PUR 150
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	1.0111321	0.9765616	1.0899327	1.1592891	1.1772057	1.1429492	1.089308	1.242253	0.9622701	0.95510136	0.90718624	1.0404902	1.4577765
Insulin-like growth factor binding protein 1	0.086571	1.1965702	1.0666667	1.1693778	0.9851903	1.1755555	0.8397576	0.92665046	0.904284	0.71320614	0.75357753	0.71639894	1.0072354
Gad65	1.0116917	0.8651385	1.4398625	2.1121607	1.3771723	1.3630314	1.7071848	0.52925	0.6491546	0.5004987	0.53935596	0.5004987	0.73816705
CDK	0.9701211	0.7228745	0.8778652	1.2863218	1.2863218	1.5168068	1.6043949	0.812719	0.79896236	0.90759795	0.77798814	0.8522917	0.9476356
CDK2	1.3657697	1.2381506	1.990142	1.0164602	1.1812068	1.6043949	1.6043949	1.33962	1.33962	1.5776209	1.545951	1.6601537	2.8350549
Cathepsin L, sequence 2	1.3332298	0.9910614	1.4123506	1.9575106	2.1338405	2.64749	1.9575106	1.9575106	1.9575106	1.9575106	1.9575106	1.9575106	1.9575106
Heme oxygenase	0.971308	0.9813652	0.8132651	1.1370586	1.0817722	1.054768	0.898913	0.898913	0.898913	0.898913	0.898913	0.898913	1.518066
Phase-1 RCT-109	1.0472698	0.9489799	0.9516796	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	1.602427
Phase-1 RCT-111	1.0991616	1.2501523	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	0.94467974	1.602427
Argininosuccinate lyase	0.5621145	0.9369346	0.5689704	0.898913	0.898913	0.898913	0.898913	0.898913	0.898913	0.898913	0.898913	0.898913	1.7954997
ONA polymerase beta	0.9854292	0.984806	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	0.8276082	1.4444917
Phase-1 RCT-103	0.96067184	1.1890321	0.6584054	0.40820017	0.63671815	0.562358	0.562358	0.562358	0.562358	0.562358	0.562358	0.562358	1.4444917
Ribosomal protein S9	1.0236068	0.8733866	0.965962	1.573319	1.972398	1.0406813	1.0012578	1.0012578	1.0012578	1.0012578	1.0012578	1.0012578	0.9629207
Phase-1 RCT-114	3.5207544	1.0651519	2.3134692	1.534768	2.171104	2.1253123	0.9818975	1.0706243	0.9432314	1.1345271	1.3534527	1.3534527	1.1275688
Phase-1 RCT-15	1.0706942	1.2533404	1.3295642	1.456981	1.7901107	1.3821354	2.9428998	1.9564955	1.4132477	0.5718145	0.779672	0.554804	2.1508055
Macrophage inflammatory protein-2 alpha	0.60903597	0.52731556	0.59482576	0.44125336	0.49057007	0.56934096	0.53515503	1.3151006	0.9104847	0.7925483	1.2518446	0.8924394	1.0145383
NGF inducible anti-proliferative putative secreted protein (PC3)	0.4284808	1.0340755	0.559794	0.62856194	0.8524826	0.8443108	0.81038013	0.7802751	0.87963307	1.1742803	1.2265552	1.060328	1.3263815
Phase-1 RCT-191	1.6574302	0.8655726	2.3567054	2.7658872	4.586087	4.586087	4.586087	4.586087	4.586087	4.586087	4.586087	4.586087	1.311189
Phase-1 RCT-43	0.9805002	1.1326715	1.074286	1.9721045	1.1352383	1.1352383	1.1352383	1.1352383	1.1352383	1.1352383	1.1352383	1.1352383	1.04597
Cyclin D3	0.9854082	0.9260107	0.8505078	1.0522962	0.9058167	0.8424695	0.8424695	0.8424695	0.8424695	0.8424695	0.8424695	0.8424695	0.9671338
Phase-1 RCT-108	0.47580445	1.4357204	0.8457402	0.8546004	0.4367131	0.51595673	0.32337614	0.8443381	0.8443381	0.8443381	0.8443381	0.8443381	0.9671338
Phase-1 RCT-175	1.0815539	1.0353265	0.902765	0.9822575	1.0696334	1.1915759	1.1472989	0.90457264	0.81471006	0.86028934	1.0417214	0.81471006	1.1805122
Phase-1 RCT-66	1.0436015	0.82159285	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	0.9822575	1.1805122
Phase-1 RCT-75	1.42627	0.7662783	0.875211	0.7662783	0.875211	0.840323	0.7568754	0.6527684	0.8102191	0.86028934	1.0417214	0.8102191	0.9401539
Acyl-CoA carboxylase	0.90393337	0.783759	1.0296332	0.783759	1.0296332	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	1.0385965
Phase-1 RCT-85	0.8324863	0.9865219	1.0296332	0.783759	1.0296332	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	1.0385965
Cystatin C	0.8601384	0.9219841	1.0296332	0.783759	1.0296332	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	0.85619086	1.0385965
Phase-1 RCT-49	1.139558	0.71701396	1.0003709	0.6905933	1.336363	0.9153129	1.0737315	2.0324595	1.0165563	1.1016553	1.6671871	1.1470342	1.1443734
Phase-1 RCT-9	1.121214	0.96015755	1.5476843	1.5947263	1.5324737	1.4865654	1.2705586	1.1800238	0.6598949	0.5060398	1.3325402	1.275604	1.594505
Phase-1 RCT-158	0.8788837	0.9562798	0.7066914	0.6525846	0.7462384	0.62909317	0.78890754	0.6572555	0.65590837	0.690618	0.88262874	0.9128111	1.012678
Phase-1 RCT-127	1.1570742	1.12839	0.8396255	0.5628027	0.78511625	0.9511941	1.046745	1.2069891	0.95483273	1.096938	1.1801865	1.3372662	1.0910318
Phase-1 RCT-127	1.1731942	0.7463664	0.830269	0.593747	0.895063	1.2648574	1.1041768	0.97028404	1.0212334	1.0507197	1.0281411	1.0535955	0.81332725
Macrophage inflammatory protein-1 alpha	1.1438026	0.9090108	1.2652097	1.3338223	1.1269813	1.1837777	1.2690744	0.95862685	0.7711137	0.72657835	0.7681262	0.62824145	0.78848358
Zinc finger protein	0.9719077	0.8653585	0.7154384	0.8947008	0.56602457	0.74729555	1.0950189	1.1827235	0.9739215	0.9433515	0.7016313	0.60373163	0.8245552
Phase-1 RCT-73	1.2394292	0.9733691	1.240943	0.8623945	1.2840785	1.4449661	1.0212553	1.0926327	0.9739215	1.1769834	1.414628	1.3814272	1.225917
Glutamine synthetase	0.94774464	1.338346	0.7741242	0.95966781	0.9727383	0.8908148	1.0048411	1.0304278	1.163315	1.265854	1.3055581	1.2699624	1.802468
Cal-binding protein	0.7314584	0.9477621	0.690364	0.6979506	0.5242738	0.53061243	1.287735	1.342994	0.971594	1.2728775	1.243926	1.4233551	1.0327133
Phase-1 RCT-242	1.0337737	0.9905766	1.1379157	1.7740561	1.4139427	1.1897812	1.1481904	0.9349772	0.9349772	0.9349772	0.9349772	0.9349772	1.1438026
Phase-1 RCT-60	1.1630429	0.9504005	1.4390586	1.4330428	1.8234882	1.1987605	1.0434972	0.9349772	0.9349772	0.9349772	0.9349772	0.9349772	1.1438026
Phase-1 RCT-50	0.86473244	1.053152	0.5931522	0.40093756	0.5484143	0.8542034	1.6656335	1.0033205	1.1197953	0.9739365	0.8944616	1.2072888	0.8534307
Ecogallin beta1	1.0932711	1.0416279	1.4231727	1.6306949	2.2487478	1.6656335	1.4635	1.6256322	0.9081317	1.0034807	1.1143871	1.1607536	1.1932777
Insulin-like growth factor binding protein 6	1.1820804	0.7652886	1.1225589	1.2228698	1.228698	1.2861344	1.4635	1.6256322	0.9081317	1.0034807	1.1143871	1.1607536	1.1932777
Phase-1 RCT-59	1.0833652	1.024917	0.917081	0.9365509	1.0070539	0.950058	1.0884624	1.099504	1.0034807	1.0034807	1.1143871	1.1607536	1.1932777
Phase-1 RCT-76	1.0357732	0.9622956	0.7566598	0.9824753	0.8370369	0.9328317	0.7887555	0.68523135	0.82289716	0.8421683	0.88846756	1.043976	1.089528
Phase-1 RCT-76	2.263105	1.0329417	1.781236	1.2340729	1.870612	1.9226501	1.1510612	1.2411466	1.1021698	1.268814	1.5011648	1.3525403	1.2644123
Ferritin H-chain	1.2451004	1.0482889	0.7652949	0.9322202	0.6914837	0.98324525	1.160931	1.4238886	1.3380276	1.4262973	1.3952559	1.632508	1.242104
Selenoprotein P	0.804508	1.011841	0.95785776	1.1653378	0.865378	0.9723288	1.0087823	1.3428742	0.8897665	0.8640308	0.7015462	0.55099124	0.76247245
Phase-1 RCT-112	1.0071084	0.8219892	0.7991957	0.7989785	0.7302453	0.8677043	0.9739215	0.9839945	0.86939174	0.98817563	0.91064127	0.94064847	0.94064847
Phase-1 RCT-214	0.8768794	1.0810237	0.8057045	0.4806681	1.105424	0.90433913	1.0138153	0.80567825	0.1078457	0.1078457	0.1078457	0.1078457	0.1078457
Thymidine synthase	0.94244105	1.1756895	1.402871	1.128302	1.327288	1.1042387	1.1847047	1.1847047	1.1847047	1.1847047	1.1847047	1.1847047	1.1847047
Phase-1 RCT-13	1.1765426	1.647189	1.2485931	0.89156936	1.3820212	1.2546532	1.2546532	1.2546532	1.2546532	1.2546532	1.2546532	1.2546532	1.2546532
Nucleosome assembly protein	1.4712149	2.8556838	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149	1.4712149
Cholesterol 7-alpha-hydroxylase (P450 VII)	1.0234778	1.5088681	1.3181542	1.0144908	0.9683446	0.9411658	0.9411658	0.9411658	0.9411658	0.9411658	0.9411658	0.9411658	0.9411658
Vesicular monoamine transporter (VMAT)	1.0354602	1.1901264	1.34507	1.4229512	1.0951056	1.2125905	0.897669	1.1837156	0.8765732	0.958499	0.958499	0.958499	0.958499
Phase-1 RCT-260	0.77804196	1.9923354	1.0113965	1.1073278	1.4037072	0.89042883	0.9826291	0.9826291	0.9826291	0.9826291	0.9826291	0.9826291	0.9826291

Table 28

Phase-1 RCT-32	1.1432043	0.85519004	1.5930785	1.7381517	1.0038717	0.91714424	0.90861094	1.0538156	1.5510481	0.8031281	0.8110076	0.9801883	1.2237376
Peroxisome assembly factor 1	1.0322083	0.99440926	1.4240562	1.5175608	1.4229635	1.0537329	0.87259704	1.0922061	0.85335374	0.7673194	0.7708891	1.0260447	1.2686807
8-oxononane DNA glycosylase	0.9920484	0.9259145	1.2338805	1.3476388	1.0543523	1.1160218	1.0574941	0.91604406	0.98311925	0.7814103	0.8461674	0.8569143	1.0155654
Phase-1 RCT-42	0.9542422	0.9749705	0.9882414	1.2489455	0.9289653	0.9473355	0.98985684	0.98311925	0.9239947	0.85025413	0.8462337	0.8161438	1.0758021
Matrix F10	0.9733268	0.70476568	0.8424853	0.7260417	1.2563331	0.96702234	0.77608224	0.77608224	0.85975255	1.1976508	1.0183441	0.8120259	0.8014531
Phase-1 RCT-184	0.667238	1.055461	0.8456446	0.93495036	0.5922131	0.40222323	0.95864204	0.8965138	1.2798812	1.2392651	1.0947924	1.2301239	
Phase-1 RCT-188	0.8122817	1.1742411	0.8424688	1.0687578	0.8763883	0.72768736	0.8033889	0.9990012	1.0997419	0.914677	1.1510662	1.3835264	1.3019238
Phase-1 RCT-119	0.8207686	1.1384119	0.8021287	0.95551002	1.0477346	0.9370368	0.9710361	0.8712182	1.0728301	0.8911828	0.89718917	0.8893243	0.45270375
Carbonic anhydrase II	0.8942457	1.3900444	0.9686939	0.9168504	1.006728	0.7618667	1.0023895	0.5718575	0.6592319	0.7640954	0.6260685	0.8872166	0.9494684
Triphosphatase	1.3704047	1.0670235	1.2938111	0.93139917	1.3333335	0.7785382	0.8356701	0.96888246	1.1066645	1.335578	1.0596726	1.0393841	0.8811491
Phase-1 RCT-171	0.79479474	1.0695549	1.0491613	0.9587803	1.0521528	0.9431559	0.9772986	0.95950571	0.95950571	0.9772986	0.95950571	0.95950571	0.95950571
Phase-1 RCT-178	1.2333217	1.0663875	0.8033563	1.0663875	0.9882843	0.8716875	1.0124098	0.95322876	0.95720933	1.2193599	0.975552	0.8594844	1.5742659
Phase-1 RCT-181	1.243147	0.9189404	1.3384517	1.3515013	1.2478894	0.7347141	0.7347141	0.7347141	0.7347141	1.0139214	0.9247528	0.8414747	1.0606225
Phase-1 RCT-144	0.9602763	0.8443131	0.9827653	1.1851059	1.2575887	1.5188548	1.1839384	0.95080666	0.96884396	0.9657024	0.77627417	0.77627417	0.94778013
Phase-1 RCT-225	0.8958112	0.5634014	0.9381137	1.0591359	0.943327	0.92234623	0.9357133	0.8076081	0.930315647	0.8310567	0.7955275	0.8034071	1.3248376
Cytochrome P450 2E1	1.0474955	1.8851987	0.9581364	1.4741321	1.2321445	0.9003652	0.8716164	0.83107486	0.83107486	0.83107486	0.83107486	0.83107486	0.83107486
ID-1	1.050820	1.2986774	1.3141364	1.7983678	1.2837155	1.3552673	0.8808385	0.84812104	0.866828	0.8742351	0.86743405	0.8400168	0.8873981
Threonine-1 (fct)	1.7213516	1.666462	0.7169766	0.5094476	0.6897191	0.6762102	0.5183954	0.33561176	0.23945069	1.454142	1.1316029	1.3639113	1.6767693
Carbonic anhydrase III	1.291413	0.8978149	1.2201675	1.4655534	1.4337068	1.4059093	0.8546875	0.930325	0.9041814	0.9050037	0.7610446	0.6453337	0.8778096
Phase-1 RCT-140	1.0187556	0.8970587	0.8284253	0.3543118	0.5439027	0.57635394	1.0111933	1.0736595	0.7849444	1.1679167	1.1743486	1.7263084	0.74021965
Cardiac component C3	0.7165867	1.7143583	0.8536668	0.83423048	0.42877805	0.5431609	0.87163704	0.7282475	1.0335816	0.6107243	0.8653339	0.5718501	0.5253046
Glucuronidase	1.0385271	0.8625189	1.1638668	1.0766887	1.2263881	1.1316431	0.99834057	0.87623087	1.0342688	0.7999411	0.74301076	0.8328856	0.67791873
3-methyladenine DNA glycosylase	1.3800988	1.0622916	1.7572804	1.393452	2.6040714	1.6593521	0.99834057	0.87623087	1.0342688	0.7999411	0.74301076	0.8328856	0.67791873
Periodic acid-Schiff reaction enzyme type II	1.0454307	1.119119	0.8986624	0.80751714	1.2651827	1.0011668	1.083794	1.0623125	0.9851901	1.3533146	1.3733801	1.417047	1.5142549
Phase-1 RCT-40	0.8972715	0.90371233	0.72362818	0.4548369	0.67871815	0.8790168	1.1625911	1.1889687	0.821732	0.8916234	1.097505	1.2539204	0.8926131
Phase-1 RCT-40	0.80065717	1.1264955	0.96528046	0.85765109	0.30360773	0.46534927	1.02804542	0.9013901	0.4228843	1.0850809	0.7598504	0.89789005	0.4350511
Sensory marker protein-30	1.0575448	1.0898081	1.3928912	1.7174227	1.5048895	1.3911639	1.2799353	0.7984356	0.974002	0.7445677	1.1316575	0.8947849	1.8917287
Cyclin G	0.90784	1.1525635	1.1670694	1.386257	1.0466366	0.9530944	1.135287	0.95511741	1.0840042	1.163345	1.1329628	1.096158	1.0715066
Phase-1 RCT-28	0.99402434	0.94780445	1.3490992	1.4570295	1.2849193	1.02514	1.0313348	0.9750034	0.9520585	0.8219422	0.9544396	0.91903025	0.980518
Emerin	1.0827245	0.8453466	0.9675309	1.2502083	0.9046095	1.0784153	0.9303685	0.9303262	0.9420057	1.2324885	0.9751874	0.9847849	1.0608404
Alcohol dehydrogenase 1	0.47733628	1.1842629	1.4324944	0.93861338	0.40559848	0.58582376	0.82795495	1.6157359	2.3386964	1.0786114	1.1048785	0.9850587	0.72283875
Stomach cell factor	0.8837266	1.0367152	0.8941948	0.54952675	0.5050594	0.73273104	0.4953281	0.92250159	0.53557814	0.7758854	1.008765	0.51943364	0.68677024
NUC1 stress activated protein kinase	0.6625642	1.3718015	0.855482	0.5701857	0.555843	0.6625798	1.2737072	1.20875	1.8810651	0.7685216	1.194555	1.007625	0.7788888
Protein tyrosine phosphatase alpha	0.9011007	1.404718	1.1533762	1.8673344	1.3376978	1.2352436	1.0271624	1.068513	0.9044825	1.096227	0.850052	0.6960374	0.9208565
Phase-1 RCT-55	0.8525771	1.261818	0.833255	0.5310882	0.3505928	1.1776051	0.854922	0.5763462	0.9243687	0.9102746	0.81695714	1.0833316	0.9389483
Uridine cytosine deaminase	1.0342815	1.0516057	0.9584334	0.6710243	0.62050578	0.80187973	1.118028	1.0446289	0.97400613	1.1630497	0.7686651	1.1233687	1.3116329
DNA topoisomerase I	1.0304797	0.9969005	0.9371692	0.4094692	0.3469732	0.5962006	1.1216901	1.2442637	0.9235368	1.1730897	1.152627	1.8801039	0.78494447
Phase-1 RCT-280	1.0685618	0.8589488	0.7294538	0.4489199	0.7063872	1.0215393	1.1147991	1.305788	1.1028528	0.97023237	1.0538455	1.1862618	0.9769067
Superoxide dismutase Mn	1.071405	0.8789546	1.118839	0.941356	1.1316545	1.2881518	1.4026873	1.1485211	1.4392659	0.9257294	1.3578448	1.086516	1.5895603
Beta-tubulin, class I	0.9373528	0.5856431	1.153271	1.0958839	1.133395	1.1482376	1.06286	0.5676826	0.6843056	1.3149594	1.4466263	1.285334	1.5714284
Carbamoyl phosphate synthetase I	0.8539611	1.128195	0.9269363	0.4680807	1.074106	0.9369276	1.5049605	1.2698846	1.8348632	0.716109	0.7268681	1.0019431	0.47491883
Disulfide isomerase	1.0407083	0.86594653	1.1687539	1.4131889	1.0187732	1.0679245	1.0439887	0.9018737	0.8467386	0.810681	0.83778495	0.7206578	0.98024255
Phase-1 RCT-141	1.1024103	1.2061467	1.1648794	1.6343912	1.0954407	1.3386052	1.5613988	1.2027136	1.0416032	1.1758837	1.0016094	1.4645007	0.9844302
14-3-3 zeta	1.12992	0.9454005	1.4821098	1.4595721	1.4262246	1.355797	0.70705913	0.85002565	0.8125208	1.501281	0.63595084	1.3123472	0.573985
Gamma-actin, cytoplasmic	0.8038318	1.268891	0.73251887	0.45266776	0.9271026	1.0179112	0.60226565	0.44861602	0.90111876	1.0386633	0.9616071	1.0596282	1.3875971
Ribosomal protein L13A	1.4600055	0.90811807	1.2264652	0.9733213	1.2456899	1.5655851	0.888427	0.81322557	0.87375873	1.7495188	2.333353	1.8734444	2.3633362
Ube-1	0.9705361	1.0570719	0.773755	0.89331176	0.6319832	0.9143458	1.028937	0.9716819	0.88724005	1.3880239	1.2045201	1.4732015	1.176787
Phase-1 RCT-55	0.97353697	0.9166051	0.9180656	0.6280322	0.8747976	0.8800038	0.8343096	0.78158166	0.8521828	0.8271786	0.8493415	0.9884585	0.7222465
C-Jun	1.0440879	1.0323554	1.3579072	1.163718	1.7588337	1.3914863	0.9158442	0.9021527	1.128549	0.8171578	0.8685426	0.542682	0.65473944
Protein O-mannosyltransferase 1 (Pomt1)	0.96847904	0.8370483	1.4959221	1.1039135	1.8716882	1.8138878	0.6887553	0.70807403	0.86756025	1.394354	1.419873	1.0721742	1.4284121
HMG CoA reductase	1.0179899	1.0900193	1.2533758	1.2960616	1.1000133	1.3388398	0.8233638	0.78165943	0.814506	0.86272034	0.9156097	0.9609848	0.83871653
Phase-1 RCT-12	0.9863505	0.71343845	0.95041	1.4058164	1.2838875	1.1184177	0.7638723	0.7853661	0.84763844	1.2154886	1.3248321	1.227491	1.4042603
Interferon related developmental regulator IFD1	0.8290552	0.718182	0.8702204	0.6316163	0.7334487	1.0183085	1.1218348	1.1218348	1.1218348	1.1218348	1.1218348	1.1218348	1.1218348
Glucose-regulated protein 78	1.1370102	1.1145056	0.8766236	0.8383366	0.8908543	1.068945	0.8214349	0.9989571	0.7829741	1.0359787	1.0197016	1.3379899	1.2961355
3-hydroxy-3-methylglutaryl-CoA lyase (HMG-CoA)	2.663582	1.4742254	1.5543119	1.699762	2.782885	2.421976	0.8011006	0.8288512	0.877747	1.027498	1.122498	1.131849	1.4706646
Casprase 6	0.9862551	1.0946555	1.26829	0.8003328	1.0520545	1.203263	1.0328696	0.9600926	0.788857	0.806592	0.806592	0.78845647	1.019783
Phase-1 RCT-169	1.0006067	0.8884655	1.0351144	0.6997022	0.8665228	0.73000458	0.79441843	0.82221055	1.2680769	0.6987915	0.720013	0.8509555	0.7454978
Phase-1 RCT-197	0.8972824	0.83655727	0.9335776	0.834303	0.78503543	1.1328113	0.915529	0.915529	0.915529	1.246375	1.3207566	1.0216105	0.8816564
Phase-1 RCT-34	1.1238456	1.0851885	1.1088041	0.9133645	1.2184882	1.2850326	0.8911585	0.88376516	1.160322	1.1823788	1.453539	1.3084046	1.2808677

Phase-1 RCT-72	1.1133952	0.9821956	1.1925662	1.1126335	1.1997893	1.089832	0.9833917	0.9598857	0.9106645	0.82374805	0.8031779	0.8022819	0.8558537	1.0062783
Phase-1 RCT-73	1.2381573	1.0347296	1.1922473	1.1539663	1.2400314	1.1450036	1.1946273	0.98169755	1.1942214	1.6532613	1.3679624	1.636046	2.153768	0.9783715
Phase-1 RCT-74	0.8671398	0.9507059	1.0815231	0.9895355	1.1861205	1.0099355	1.1923001	1.5527099	1.0310891	0.9831633	0.9845277	1.0851633	0.9783715	0.9783715
Phase-1 RCT-75	0.9877728	0.9144881	1.0815231	0.9895355	1.1861205	1.0099355	1.1923001	1.5527099	1.0310891	0.9831633	0.9845277	1.0851633	0.9783715	0.9783715
Phase-1 RCT-76	1.0357327	1.2536536	1.0934566	0.9653578	1.0234164	0.9831103	0.8837103	0.9630356	1.0143576	0.7963907	0.8214992	0.67050266	0.9763715	0.9763715
Phase-1 RCT-77	1.1879808	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305
Phase-1 RCT-78	0.9846134	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305	1.0427305
Phase-1 RCT-79	1.0233377	0.9470427	0.9278723	0.9165815	0.9347139	1.0586816	1.0347139	0.9347139	1.0586816	1.0347139	0.9347139	1.0586816	1.0347139	1.0347139
Phase-1 RCT-80	1.0135953	1.2205663	1.3995919	1.0165514	1.1324359	1.1657312	1.0052933	1.0347139	1.1657312	1.0052933	1.0347139	1.1657312	1.0052933	1.0052933
Phase-1 RCT-81	1.2007958	0.95852077	1.2021941	1.1649116	1.1042914	0.7637684	0.7637684	1.0178912	0.7637684	1.0178912	0.7637684	1.0178912	0.7637684	0.7637684
Phase-1 RCT-82	0.6429828	1.1572665	0.9306524	0.5843116	0.4381075	0.5796504	0.5796504	1.0178912	0.5796504	1.0178912	0.5796504	1.0178912	0.5796504	0.5796504
Phase-1 RCT-83	0.73524504	1.0077008	1.2805593	1.9610777	0.9695022	0.8774273	1.0879912	0.9300031	1.1553278	1.2451797	1.2536878	1.106393	1.0236954	1.0236954
Phase-1 RCT-84	0.8680874	1.1623305	1.0807781	1.2168884	0.7130105	0.45011634	0.3686381	1.2078012	0.2659439	1.0346354	1.0046551	1.0294604	1.156765	1.156765
Phase-1 RCT-85	0.9098114	1.0619979	0.8057781	1.2419884	1.1370323	1.1041684	0.9626516	1.2078012	0.2659439	1.0346354	1.0046551	1.0294604	1.156765	1.156765
Phase-1 RCT-86	1.1351212	0.8182753	1.043757	1.0321689	0.5732338	0.4047747	0.72811425	1.2148902	1.0271815	1.1759986	0.7326561	0.67206624	0.905281	0.905281
Phase-1 RCT-87	1.0874405	0.8182753	1.043757	1.0321689	0.5732338	0.4047747	0.72811425	1.2148902	1.0271815	1.1759986	0.7326561	0.67206624	0.905281	0.905281
Phase-1 RCT-88	0.9688095	0.637481	0.9705102	0.8206004	1.0652775	0.7518933	0.9635931	1.1534591	1.0308214	1.1388974	1.1532231	1.270602	1.177391	1.177391
Phase-1 RCT-89	0.8648782	0.8972585	0.8519453	1.6126699	0.7379817	0.7518933	0.9635931	1.1534591	1.0308214	1.1388974	1.1532231	1.270602	1.177391	1.177391
Phase-1 RCT-90	1.0705428	0.9402807	1.2456761	1.2895139	1.3550489	1.3708347	1.4489767	0.9375599	1.233314	1.2714282	1.3938954	1.1698949	1.5054729	1.5054729
Phase-1 RCT-91	1.0657388	0.9716207	1.2577662	1.0316429	1.2420002	1.5161802	1.1218771	1.0875904	1.3763327	1.5237416	1.0906557	1.4650033	1.780411	1.780411
Phase-1 RCT-92	0.97050594	1.03552	0.8767806	0.73361277	0.52958334	0.49527457	0.8754103	0.97845285	1.1026621	1.072388	0.9476537	1.4097484	1.780411	1.780411
Phase-1 RCT-93	0.9038951	1.0951402	0.8765607	1.6329819	0.51844907	0.6947427	1.3997266	1.0496899	0.81841205	0.8236077	0.8737618	0.9688246	1.780411	1.780411
Phase-1 RCT-94	0.9335124	0.6337047	0.7590024	0.80086284	1.1368918	1.3008338	0.8515293	1.0653798	0.66303355	1.3870783	1.2691907	1.2636302	1.0560724	1.0560724
Phase-1 RCT-95	0.67262757	0.9257827	0.8012847	0.8079736	0.7277462	0.701987	1.0989872	1.135462	0.93373924	0.9592904	0.81321585	0.6604689	0.9354985	0.9354985
Phase-1 RCT-96	0.99601495	0.87353645	0.8250556	0.5976361	0.92469105	0.8330148	0.8842831	0.928817	0.75068475	1.2428519	1.2688679	1.4716566	1.1620263	1.1620263
Phase-1 RCT-97	0.74397117	1.19217	1.0259769	0.4627024	0.6400554	0.5712596	1.164458	1.143033	1.3613298	1.741677	1.583422	1.4579244	1.3210815	1.3210815
Phase-1 RCT-98	0.8167134	1.2765094	0.8298692	0.89137443	0.7033424	0.7302688	1.0032681	1.1755319	1.3148559	0.9897834	1.2415227	1.4905001	1.22148	1.22148
Phase-1 RCT-99	0.99644954	1.339937	0.8171903	0.4841936	0.7225525	0.748131	0.4191481	0.7732742	0.8508705	1.0230259	0.9809522	0.8072224	0.8416339	0.8416339
Phase-1 RCT-100	1.0794864	0.8789398	1.189568	1.8433942	1.4073111	1.1958969	0.1324122	0.4712764	1.3391072	0.7791887	0.8175948	1.0714765	1.339432	1.339432
Phase-1 RCT-101	1.293706	1.2445963	1.172503	0.5567092	0.7123004	0.9497531	1.159366	0.97870237	1.0032083	1.0094881	1.0274278	1.1928287	1.8005366	1.8005366
Phase-1 RCT-102	0.8824138	0.9814983	0.8043948	0.6368971	0.7123004	0.9497531	1.159366	0.97870237	1.0032083	1.0094881	1.0274278	1.1928287	1.8005366	1.8005366
Phase-1 RCT-103	0.9302943	1.023312	0.801128	0.7542283	0.76369871	0.6563871	0.6563871	0.6563871	0.6563871	0.6563871	0.6563871	0.6563871	0.6563871	0.6563871
Phase-1 RCT-104	0.8371521	1.088849	0.88742936	0.8734563	0.8105515	0.8658187	0.8658187	0.8658187	0.8658187	0.8658187	0.8658187	0.8658187	0.8658187	0.8658187
Phase-1 RCT-105	0.54499594	1.2101953	1.2101953	0.1692084	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053	0.49675053
Phase-1 RCT-106	0.98571235	0.9816981	1.1748432	1.6093974	1.1732515	0.9735441	0.8551874	1.018032	0.94057477	1.0552963	1.155046	1.1427014	1.1805742	1.1805742
Phase-1 RCT-107	0.91112721	1.1151897	1.0671968	0.91087437	1.5203102	1.0298183	0.6734012	1.0038264	0.9201314	1.0688312	1.0492216	0.9861745	0.8788387	0.8788387
Phase-1 RCT-108	0.94756013	0.8442578	0.78342485	1.101536	0.6220579	0.6937524	0.8908796	1.0579951	0.865129	1.1327789	1.1327789	1.209089	1.1112541	1.1112541
Phase-1 RCT-109	1.1102699	1.1721668	0.8589903	0.6779081	0.6087255	0.96863765	0.8156827	0.6615355	0.8290382	1.0609827	0.8779379	0.537698	0.9430685	0.9430685
Phase-1 RCT-110	0.4984256	0.8004152	0.46268705	0.3024132	0.40591794	0.5568242	0.84492416	0.8183254	0.5363905	0.78440446	1.3252717	0.5643275	0.7936628	0.7936628
Phase-1 RCT-111	1.0871125	1.2621678	1.1428015	1.2359841	0.86450636	0.98247075	0.8302064	0.94461733	0.7578076	1.0037653	0.8948493	0.5377689	1.2561893	1.2561893
Phase-1 RCT-112	1.2073834	0.71102136	0.55843636	0.3423401	0.6807639	0.68224134	0.77032985	0.86051345	0.60705024	0.78777247	0.8331726	0.9735438	0.73609644	0.73609644
Phase-1 RCT-113	1.008346	0.7785915	0.8204725	1.589474	1.171131	1.304474	0.7434146	0.6097271	0.8700406	0.7033399	0.7153984	0.5910525	1.0765249	1.0765249
Phase-1 RCT-114	0.93843536	0.9008933	0.73951334	1.0530947	0.716372	0.7525065	0.9476895	0.9398576	1.1756442	1.1093396	1.0043801	0.92692524	1.0620134	1.0620134
Phase-1 RCT-115	0.6861184	0.953128	0.8242636	0.4425807	0.4135071	0.3901537	0.3901537	0.3901537	0.3901537	0.3901537	0.3901537	0.3901537	0.3901537	0.3901537
Phase-1 RCT-116	0.8588883	0.93018166	0.863429	1.4338209	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246	0.9861246
Phase-1 RCT-117	1.8189607	0.8286713	0.3883264	0.3805298	0.3749177	0.3899357	0.3899357	0.3899357	0.3899357	0.3899357	0.3899357	0.3899357	0.3899357	0.3899357
Phase-1 RCT-118	1.2992693	0.89466233	1.1801761	0.8412984	1.1041149	1.041149	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884
Phase-1 RCT-119	1.8716285	0.86136055	1.8705761	0.8412984	1.1041149	1.041149	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884	0.9889884
Phase-1 RCT-120	0.9404785	1.063929	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885	1.0326885
Phase-1 RCT-121	1.5633276	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506	0.82817506
Phase-1 RCT-122	0.80244477	0.8891567	0.34806932	0.24575768	0.32712877	0.44365287	1.1903177	1.0937081	1.2834041	0.9057559	1.1175183	1.1540078	0.7680079	0.7680079
Phase-1 RCT-123	0.9797063	1.2353641	1.271612	1.3941572	0.5072386	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665
Phase-1 RCT-124	1.025163	0.9510734	1.271614	1.3941572	0.5072386	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665	0.7175665
Phase-1 RCT-125	1.115705	1.0268994	0.8414884											

Table 28

Phase-1 RCT-3	1.2419602	0.9470186	1.5433484	1.5270722	1.8369333	2.0059	1.095451	1.0541228	1.3416981	1.4915994	1.5781041	1.5285546	1.4023398	1.229468
Falutin beta (falub)	1.5982136	0.84369704	1.7397356	0.471173538	1.0774494	0.78600327	1.1818573	1.2693178	1.3416981	1.4915994	1.5781041	1.5285546	1.4023398	1.229468
3-hydroxyisovaleryl dehydrogenase	1.0643935	0.8077216	0.9610719	0.1644736	0.9944007	0.78600327	1.1818573	1.2693178	1.3416981	1.4915994	1.5781041	1.5285546	1.4023398	1.229468
Carbonic anhydrase III, sequence 2	1.1974863	0.7759304	1.1386294	0.41119775	0.7535555	0.5811884	1.1212432	1.20272	1.2693178	1.3416981	1.4915994	1.5781041	1.5285546	1.4023398
Phase-1 RCT-10	0.8576065	0.6535234	0.6091372	0.6593756	0.5997767	0.6932076	1.016321	1.397116	1.567599	1.7397356	1.8369333	2.0059	1.095451	1.0541228
Alpha-2-microglobulin	0.6183737	0.9435072	0.3278845	0.6780633	0.5894346	0.5817383	1.1376168	1.4279788	1.7501458	1.9212828	1.2114749	1.0924637	0.9030911	0.9590261
Dynamin-1 (D100)	0.119562	0.7957225	1.152332	1.3243297	1.1161467	0.8956577	1.1087668	1.1715716	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546	1.4023398
Uryl oxidase	1.0105428	1.1330013	1.1675129	1.5395381	0.9996994	0.8949975	1.497616	1.2894374	1.7397356	1.8369333	2.0059	1.095451	1.0541228	1.8369333
Phase-1 RCT-252	0.84924257	0.691804	1.0715897	1.5575372	1.169005	1.5967637	1.0639025	1.0543655	1.497616	1.2894374	1.7397356	1.8369333	2.0059	1.095451
Phase-1 RCT-29	1.3854151	0.880181	1.6711055	1.0292761	1.5967637	1.0639025	1.0543655	1.497616	1.2894374	1.7397356	1.8369333	2.0059	1.095451	1.0541228
Phase-1 RCT-278	1.3524005	0.7211616	1.2574205	0.7921466	0.97875476	1.1045962	1.1639333	1.2206227	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546	1.4023398
Phase-1 RCT-42	1.0193301	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203	0.639203
Phase-1 RCT-25	0.9627033	0.8765007	1.2335186	0.7890755	0.8496833	0.8681229	1.0347241	1.0714201	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546	1.4023398
Chondroin P450 2C11	0.9537987	1.1740211	1.2949149	1.5665246	0.9578871	0.9048619	1.231681	0.96625237	1.1071248	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546
Phase-1 RCT-202	0.87648324	1.2932035	0.8363027	0.5222886	0.7768954	1.1517814	1.2450514	1.0831318	0.9302849	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546
Proliferating cell nuclear antigen	0.90840045	1.285015	1.241412	0.818202	1.1517814	1.2450514	1.0831318	0.9302849	1.2504584	1.3690518	1.47433194	1.5781041	1.5285546	1.4023398
Activating transcription factor 3	1.149528	0.801957	1.286311	1.2442491	1.468224	1.358183	0.9888755	0.92866794	1.004718	1.051897	1.103494	0.9764838	0.8077216	0.906771
Focal adhesion kinase (pp125FAK)	0.6747646	1.202056	0.9320787	1.359481	0.6862366	0.7128604	1.221697	1.1653109	1.004718	1.051897	1.103494	0.9764838	0.8077216	0.906771
Phase-1 RCT-289	0.8072727	1.0415077	0.863539	0.7777567	0.7249048	0.9748097	1.049585	1.049585	1.049585	1.049585	1.049585	1.049585	1.049585	1.049585
Phase-1 RCT-253	1.202125	0.707792	1.0530827	1.209424	0.9623434	0.9228953	0.9748097	1.049585	1.049585	1.049585	1.049585	1.049585	1.049585	1.049585
Iron-responsive element-binding protein	0.7253452	0.8828642	0.8886303	0.8545155	0.6590506	0.8462193	0.8643935	1.057422	1.082592	1.0510419	1.043703	0.9635536	1.0741138	1.021856
MHC class II antigen RT1A1(a) alpha-chain	1.0785739	0.7043267	1.2992707	0.9309524	1.11526	1.088743	0.7948824	0.6923142	0.6923142	0.6923142	0.6923142	0.6923142	0.6923142	0.6923142
Act subunit	0.6313739	1.2120228	0.9035825	0.4810108	0.5802505	0.68762138	1.1681235	1.5764129	1.9519094	0.8368416	1.0796047	1.2695124	1.6141987	1.2436677
Phase-1 RCT-171	0.8541404	1.0110952	1.1702248	1.8270328	1.022911	0.9712834	1.0948389	1.0865817	1.1691365	1.0796047	1.2695124	1.6141987	1.2436677	1.2436677
Phase-1 RCT-43	0.5811948	0.7719015	0.6286116	0.5298028	0.5198051	0.3908036	0.2818176	0.8373017	0.736761	0.8127924	0.745623	0.657652	0.6963773	0.8512915
Phase-1 RCT-270	0.6594982	0.94370365	0.6276115	0.5927029	0.43001354	0.5249834	0.8058478	0.9010438	0.8364065	0.9493927	0.8755944	1.0178063	0.78330505	0.8309505
Calmodulin-stimulating factor-1	0.7414118	1.2320897	0.6132538	0.5021209	0.6022068	0.5204162	0.8783654	1.0836004	0.8662696	0.9714825	1.046073	1.1488562	0.95220387	0.9074785
N-cadherin	0.3743367	1.0802827	0.93706816	1.2184581	0.8510604	0.9650876	0.95349723	0.8332016	0.8311763	0.7333394	0.6573936	0.84459246	0.8676917	0.8676917
Phase-1 RCT-62	0.8944514	0.9645455	1.102844	1.5039088	1.095621	1.3819175	1.0368507	1.1515538	1.134975	1.1241823	0.940457	0.8692907	0.9778233	0.92433727
AT-3	1.0306692	0.8847266	0.4208351	1.1187723	0.5762769	0.400574	0.98489294	0.9486727	0.9564677	0.8876907	0.78657634	0.8024801	1.0284558	0.8873488
Phase-1 RCT-22	0.9485357	1.0595991	0.8618068	1.4422562	0.9748835	0.9737454	1.0343265	1.1711165	1.1711165	1.1711165	1.1711165	1.1711165	1.1711165	1.1711165
Phase-1 RCT-18	0.9478504	0.9095535	0.8676879	0.79524696	0.76668827	0.9973713	1.0223868	1.0344353	0.95874135	0.8838861	0.8349713	0.8107092	0.9253744	0.8976154
Phase-1 RCT-123	1.0073142	0.9902706	1.301395	1.5053019	1.142502	1.0285412	1.0402422	1.0472316	1.0217919	1.0832216	1.1344934	1.1581599	1.0141597	1.0704919
Phase-1 RCT-66	0.96470374	1.2055817	0.9216945	0.6959614	0.81176764	0.95913474	1.013353	0.8462897	1.1113377	1.1306036	1.4033075	1.2622272	1.2473986	1.4511814
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.8856557	0.82510436	0.6052514	0.48077744	0.5286383	0.372656	0.8006228	0.9887587	0.7874866	0.7451109	0.8405779	0.7217597	0.73203208	0.8653918
Glucose transporter 2	1.0863418	1.232514	0.7358303	0.59735805	0.68805825	0.8233447	1.3279458	1.262375	1.1871686	0.7977441	0.7356782	0.5618695	1.0036173	0.9224112
Multidrug resistant protein-2	1.1958743	1.0462384	1.4659749	1.1762651	1.3614495	1.0012009	0.86359864	0.99718916	0.91080534	0.7658961	0.6742762	1.036192	1.3688895	1.3688895
Mitochondrial protein-1	1.2074244	0.9900391	1.4324787	1.378032	1.4655391	1.3983893	1.0033363	0.8559692	0.8795128	0.8655916	0.7879114	0.7794595	0.87182504	1.4578935
Phosphatidylmethanodamine-binding protein	0.8849757	0.8605417	0.8621124	0.50779676	0.4162196	0.738188	0.80380666	0.865211	0.85506	1.1518614	1.6692395	1.5651221	1.4186147	1.3067123
Phase-1 RCT-180	1.1246364	1.0255389	0.8684595	0.762861	0.9048056	1.0086386	1.0086386	0.8335386	0.9425121	0.8971559	0.8197124	1.1720419	1.0815985	1.0400059
Integrin beta-4	1.0087177	1.0518369	1.264788	1.687235	1.1278807	1.174758	1.1350151	1.019847	1.052367	1.2259655	1.1399605	1.0759986	1.3040393	1.3981224
NADPH cytochrome P450 oxidoreductase	1.9322879	0.852622	2.068334	1.4833488	4.360386	2.130577	0.8450244	0.6818187	1.0587292	0.8092549	0.92649186	1.2149218	0.983718	1.357886
War1	0.8092155	0.862498	0.6897393	1.5420702	0.9433835	0.9367883	1.1781044	1.0367784	1.165472	0.67381454	0.6865766	0.569315	0.73154205	0.983718
Endogenous retroviral sequence, 5' and 3' LTR	1.1175263	0.82498	0.82270503	0.6424979	1.160761	1.0870938	0.9563458	0.8232106	0.8512393	0.7733918	0.8101371	0.819033	0.8513997	0.8643054
Phase-1 RCT-53	0.8858331	0.87322843	0.7933582	0.85195197	0.732425	1.028807	0.986458	0.8232106	0.8512393	0.7733918	0.8101371	0.819033	0.8513997	0.8643054
Phase-1 RCT-54	0.8246958	1.0395923	0.91050225	1.0461387	0.7643387	0.73961065	1.045004	1.1658753	0.97225475	1.0396193	0.965576	0.9179235	0.9897666	0.969173
Phase-1 RCT-240	0.8661065	0.7634113	0.8657406	1.0263587	1.0770789	1.0871097	0.7997171	0.6954027	0.8053089	0.7761101	1.3812833	1.8607038	1.510882	1.860515
Osteopontin	0.37294625	1.2682473	1.2588592	1.2273063	1.4955987	1.0863777	1.0840009	1.1013263	1.133397	1.0038668	1.3812833	1.8607038	1.510882	1.860515
Organic anion transporting polypeptide 1	1.1176431	1.0826565	1.3918141	0.744183	1.3542881	1.3903283	0.8387994	0.84010544	1.1834466	0.85397054	0.8406566	0.8804561	0.8695527	0.8695527
Phase-1 RCT-241	1.0711755	1.0630684	1.1233119	1.23911	0.7453376	1.029761	1.381029	1.1751031	1.0387287	0.9742733	0.72889715	0.6944316	0.93269765	1.0625819
Tissue factor pathway inhibitor	1.0258476	1.0414428	0.7572498	1.5414224	0.52728057	0.51031723	1.332475	1.1105531	1.0705919	1.2675196	1.7164123	1.5990003	1.1151888	0.8595637
Cytin-dependent kinase 4 inhibitor P27Nip1 (allelic)	1.1927356	1.4845104	1.1327804	1.1730086	1.1888254	1.1207314	1.1824529	0.88042927	0.9101059	0.9259189	0.8537936	0.7616587	0.7616587	0.9510063
Phase-1 RCT-259	0.926753	1.086015	0.837882	0.565442	0.975782	1.1645881	0.8164531	0.883791	0.93110514	0.84115887	0.7807347	0.87470156	0.97226036	0.97226036
Phase-1 RCT-39	1.0241119	0.9782214	1.1564904	1.0204361	1.2544413	1.0620436	1.3814181	0.9489077	1.0533796	0.8384984	1.121287	0.82458024	0.9340587	1.0247676
Phase-1 RCT-259	0.9585481	0.40683	0.9343943	1.2615271	1.3448216	0.9157726	0.9157726	0.9157726	0.9157726	0.9157726	0.9157726	0.9157726	0.9157726	0.9157726
Phase-1 RCT-113	0.9594933	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743	1.0244743
Adrenomedullin translocator 1	0.9416966	1.0928832	0.77238476	0.7628425	0.82071025	0.6323763	1.0278008	1.0661594	1.0661594	1.0661594	1.0661594	1.0661594	1.0661594	1.0661594
Alpha-1 acid glycoprotein	0.25034368	0.53976395	1.3071691	0.4378864	0.9776531									

Organic cation transporter 3	1.0301453	1.3488048	0.80070218	1.0652692	0.71659427	0.9895336	0.9365115	0.9267911	0.8912189	1.404158	1.4708937	1.4238292	1.7613426	1.5789419
Hydroxymethylglutaryl-CoA lyase	0.98821913	1.1583726	0.95342696	1.2577945	0.757795	0.82413185	1.2860653	1.1976819	1.0559226	0.8165994	0.728138	0.6881518	0.8014193	0.7445568
Phase-1 RCT-43	1.0285506	0.90022303	0.857307	1.0480281	0.8560021	0.830705	0.9115372	0.81285885	0.9228913	0.9833371	0.91422913	0.912772	1.0929728	1.0137635
Phase-1 RCT-45	1.0807194	1.019411	1.0503108	1.1554818	0.9225176	0.9704904	0.9296548	1.0240709	0.7615164	0.84947246	0.8019444	0.76476065	1.0015436	1.0220373
Malate dehydrogenase, cytosolic	0.90275073	0.86293143	1.2459652	0.75300956	0.85485244	0.8714356	1.0554999	0.9453218	1.3310063	0.7337379	1.0148759	0.9350952	0.88161474	0.9154116
VLDL element	1.0969437	0.83425545	0.80203897	1.8166028	1.1905238	1.3916191	0.62662956	0.67833114	0.51680984	1.1380651	0.76005335	0.6331028	1.1167894	0.89391025
Phase-1 RCT-189	0.8037233	0.7256735	0.63712245	0.7519141	0.93563356	0.8886763	1.2010952	1.4076087	1.0103855	0.86777444	0.99648947	1.081118	0.84504074	0.86319554
Alpha-fetoprotein	0.87176345	1.090529	0.88816787	1.0959043	0.8635052	1.0159815	1.0432417	1.0750349	1.0251554	1.1885084	1.347292	1.2889081	1.0859689	1.1933863
Calcitriol	1.12528	1.1341481	0.7394714	0.6764127	0.8169939	1.1230067	1.133545	1.5370404	1.0214787	0.8215563	1.5315366	1.550103	1.1049429	1.1380682
Tissue plasminogen activator	1.4498416	0.8225771	0.7822282	0.6170071	1.1176741	1.1363394	0.94095386	1.0123173	0.84880775	1.0425569	0.8418838	1.501152	0.80510026	0.8827507
Phase-1 RCT-185	0.93342245	0.9289225	0.7915086	0.69290576	0.91442055	0.94666195	0.836889	0.94298616	0.99389505	0.8418838	1.2581655	1.5135446	1.3080994	1.3076329
Liver fatty acid binding protein	0.81040937	0.9328622	0.5894437	0.3807308	0.4350373	0.7242734	0.8122993	1.1636335	0.61649704	1.2581655	0.8482971	0.7861935	0.9423359	0.9177624
Alpha-1 microglobulin/bikunin precursor (A1BP)	0.87085785	1.106717	0.8036498	0.42533175	0.78149736	0.5308778	0.9856555	0.8218106	0.9977852	0.8805515	0.92705107	0.8505301	0.9176945	0.9176945
Phase-1 RCT-234	1.0994077	0.7412197	1.304632	1.509207	1.3209436	1.0308718	0.9856555	0.93581134	0.7974308	1.0807358	1.6956377	1.5135446	1.3080994	1.3076329
Phase-1 RCT-151	1.1442688	0.78917874	0.78926677	1.3204733	1.797898	1.1264751	1.069915	0.8884965	1.0546563	1.0207794	1.3977653	0.7640918	0.8893907	0.9176945
Phase-1 RCT-158	0.897544	1.0273651	0.8370827	0.6434123	0.8528887	0.79791164	0.8453091	0.7318168	0.8979125	1.1710942	1.0370238	1.089748	1.0920931	1.0833702
Phase-1 RCT-221	0.9421934	1.0197659	0.9307757	0.65327706	1.215426	1.1188695	0.87043047	0.811059	0.8654027	0.9431789	0.8805119	0.8090139	1.1361719	1.1025925
Phase-1 RCT-225	0.8915443	1.2072545	1.3994507	0.77425975	1.2194909	1.2393553	1.0856267	0.9505844	1.1790231	0.9252942	0.82392877	0.4745768	0.7515154	0.8839586
Organic anion transporter 3	1.8189772	1.090431	1.592362	1.2152635	1.9331468	1.7775559	1.1864791	1.1477245	1.1472094	1.1123015	1.3156707	1.1346888	1.282249	1.2768875
Matrix metalloproteinase-1	0.43498005	0.832394	0.489178	0.25302842	0.44110575	0.48643783	0.9369872	1.2133117	0.79880877	1.0951815	0.8130394	1.281949	0.7516023	0.7019567
Urinary protein 2 precursor	0.81532145	0.8073475	0.9550391	0.96205653	0.9316597	0.8189821	0.8807135	0.8014727	0.9089524	0.9186299	0.9894123	0.848052	1.0486726	0.9062513
Phase-1 RCT-312														
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 hr: yes=rec; necrosis observed; yes=both, necrosis with inflammation observed; no, no inflammation observed														
(5) Predictive gene (as in Table 18 and as included in Table 25)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)															
Compound-Dose (2)	PUR 150	QUIN 25	QUIN 25	QUIN 25	QUIN 25	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	STRZ 20	STRZ 20	STRZ 20	STRZ 75	STRZ 75
Animal Number (3)	33	2841	2842	2843	2844	2845	2846	2847	2848	2849	1721	1722	1723	1731	1732
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	1.035789	1.107073	0.987946	1.597087	0.9872246	0.89195	0.739169	1.0317055	1.1805946	1.065533	0.9161218	1.0452432	1.1386207	0.9161218	1.1386207
Insulin-like growth factor binding protein 1	1.2740602	0.8936892	0.8282224	1.1091291	0.9515636	1.0174003	0.895367	0.9535198	1.0737688	1.1769455	0.9564167	0.94322707	1.0912783	0.9564167	1.0912783
Gadd153	0.7433131	1.0717872	0.9410528	1.1465594	1.1130328	1.1465594	1.1130328	1.1465594	1.1130328	1.1465594	0.9410528	0.9410528	1.0912783	0.9410528	1.0912783
c-myc	0.9946709	1.2242168	1.065608	1.1188375	1.0729123	1.1388034	0.9634779	1.2761023	0.9978787	1.2532588	1.2634337	1.1432694	1.2778863	1.2634337	1.2778863
NIPK	2.138561	1.0515382	1.0313617	1.0920169	1.0716806	1.0920169	1.0716806	1.0920169	1.0716806	1.0920169	1.0313617	1.0313617	1.1570712	1.0313617	1.1570712
Cathepsin L sequence 2	1.0967287	0.9515382	0.97171	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9515382	0.9515382	1.1570712	0.9515382	1.1570712
Heme oxygenase	1.3346655	0.97171	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9978704	0.9515382	0.9515382	1.1570712	0.9515382	1.1570712
Phase-1 RCT-109	1.1627782	1.01567	1.1315769	1.2602575	1.0954947	1.050131	0.9700957	1.1597362	1.0229003	1.1071004	1.0229003	1.1071004	1.1597362	1.0229003	1.1597362
Phase-1 RCT-111	1.2607344	1.4631819	1.4137486	2.2581432	1.784231	1.632306	2.062451	1.4597362	1.0229003	1.1071004	1.0229003	1.1071004	1.4597362	1.0229003	1.4597362
Arabinoside/azotidine base	1.0318241	0.8265192	0.9242163	1.0660062	0.8080958	0.900191	0.9306811	1.0308025	0.8080958	0.9306811	1.0308025	0.8080958	1.0308025	0.8080958	1.0308025
CNA polymers beta	1.2017128	0.8678996	1.138223	1.1010942	1.338223	1.1010942	1.338223	1.1010942	1.338223	1.1010942	1.338223	1.1010942	1.338223	1.1010942	1.338223
Phase-1 RCT-103	1.157387	1.1359147	1.1610942	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838
Ribosomal protein S9	1.0513265	1.2371743	1.0742	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838
Phase-1 RCT-114	1.1017004	1.1078952	1.0637233	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838	1.091984	1.0348531	1.1788878	1.2577988	1.2658838
Phase-1 RCT-15	1.0450137	0.9289722	0.98205427	1.5719418	0.8571353	0.9831936	1.1350106	1.051125	0.9721848	1.8720434	0.930153	0.8148239	0.88732237	0.930153	0.8148239
Macrophage inflammatory protein-2 alpha	0.80459315	0.8378341	0.786496	0.75382537	0.7000711	0.85527596	0.82018685	1.0825168	0.104941	1.2836346	1.3568833	0.7674263	1.3568833	0.7674263	1.3568833
IGF-inducible anti-proliferative putative secreted protein (PC3)	1.0881647	1.2765439	0.9913133	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128	1.166128
Phase-1 RCT-181	1.005507	1.286888	1.1108173	2.2026597	1.4071512	1.6936817	1.098743	0.8830268	0.8505123	0.8602705	0.7897526	0.7030784	0.7897526	0.7030784	0.7897526
Phase-1 RCT-65	1.1438824	0.83072	0.9048943	1.0219144	1.1654114	1.1438824	1.0219144	1.1654114	1.1438824	1.0219144	1.1654114	1.1438824	1.0219144	1.1654114	1.1438824
Cyclin D3	1.1769479	0.970552	1.0970552	0.970552	1.0970552	1.0970552	1.0970552	1.0970552	1.0970552	1.0970552	0.970552	0.970552	1.0970552	0.970552	1.0970552
Phase-1 RCT-106	0.916993	0.57548136	0.530309	0.5975161	0.5116786	0.4206674	0.49290417	0.3745457	0.1721184	0.1241226	0.1922858	0.14321948	0.1922858	0.14321948	0.1922858
Phase-1 RCT-56	1.3502429	0.9006873	0.7160121	0.88300467	1.0155071	0.93224883	0.9690519	1.0989353	1.1677673	0.96120447	1.4244707	1.2816162	1.4244707	1.2816162	1.4244707
Phase-1 RCT-192	1.250124	1.4734133	1.0174372	1.9605625	1.3787202	1.2384881	1.1150541	1.3240062	1.2158002	1.2158002	1.2158002	1.2158002	1.2158002	1.2158002	1.2158002
Phase-1 RCT-75	0.9339354	0.9165118	0.8534338	1.1899084	0.9653266	0.83604864	0.9651411	1.152685	1.2600454	1.182892	1.2368667	1.3815666	1.182892	1.2368667	1.3815666
Acetyl-CoA carboxylase	1.1680063	0.9385432	0.905343	0.8555185	0.8458805	0.7125906	0.7628572	1.2797401	1.0504334	1.2872291	1.134135	0.8818301	1.134135	0.8818301	1.134135
Phase-1 RCT-95	1.1684146	0.7333889	0.8526145	0.8555185	0.8458805	0.7125906	0.7628572	1.2797401	1.0504334	1.2872291	1.134135	0.8818301	1.134135	0.8818301	1.134135
Cystatin C	1.1762972	1.007515	1.0354286	1.1619439	1.1451591	1.2206876	1.2807841	0.8391582	1.03431263	1.1358556	2.317324	0.9707008	1.1358556	2.317324	0.9707008
Phase-1 RCT-49	1.076489	0.954339	0.954339	1.762238	1.237148	0.9897113	1.3924216	1.03431263	1.0012814	0.94278706	1.2652808	1.530787	1.2652808	1.530787	1.2652808
Phase-1 RCT-9	1.0792944	0.9082421	1.081488	1.9281139	0.8713327	0.8465375	0.7705397	1.762222	1.043361	1.2222339	1.2317566	1.3948302	1.2317566	1.3948302	1.2317566
Gadd45	1.173178	0.9082421	1.1307341	1.0988852	1.1610404	1.0886551	1.10988	0.986068	1.042135	1.0348848	1.503478	0.7008354	1.0348848	1.503478	0.7008354
Corfilin	1.011674	1.0696848	0.78655185	1.308295	1.2088449	1.0791302	1.112558	0.9430408	0.9229553	1.021516	0.7008354	0.6848373	0.7008354	0.6848373	0.7008354
Phase-1 RCT-127	0.707767	1.0617851	1.0435962	1.1756982	1.0974263	1.1756982	1.0974263	1.1756982	1.0974263	1.1756982	1.0974263	1.1756982	1.0974263	1.1756982	1.0974263
Macrophage inflammatory protein-1 alpha	0.9151603	1.1104408	1.0909024	1.4057719	1.1470653	1.1203113	1.0748428	0.9613134	0.8400785	1.4573549	0.81371444	0.8594413	0.81371444	0.8594413	0.81371444
Zinc finger protein	0.9840857	1.0291015	0.96508384	0.8452626	0.8801879	1.0076854	0.9693736	1.0728621	1.0167111	1.0207121	0.8857702	1.207213	0.8857702	1.207213	0.8857702
Phase-1 RCT-73	1.1155926	0.86360496	0.90526706	0.8452626	0.8801879	1.0076854	0.9693736	1.0728621	1.0167111	1.0207121	0.8857702	1.207213	0.8857702	1.207213	0.8857702
Glutamine synthetase	0.98075974	0.8018779	0.85552824	1.045143	0.861671	1.2936996	0.9341326	0.8494085	0.757324	0.8801477	0.7278925	1.2947617	0.7278925	1.2947617	0.7278925
Cardiolipin protein	1.0424656	0.865512	0.92573833	1.3765475	1.1038216	1.0927283	1.0830685	0.8581015	0.747821	1.3343729	1.5025367	0.9211087	1.5025367	0.9211087	1.5025367
Phase-1 RCT-242	1.1310492	1.0535328	1.0058976	1.2742422	1.1717432	1.0444403	1.0493222	1.0014558	0.84219915	1.5487115	1.3775797	0.8943315	1.3775797	0.8943315	1.3775797
Phase-1 RCT-50	1.1718713	0.8903328	0.868657	1.280277	0.7272502	0.8386966	0.8872455	1.026789	1.2483238	1.057475	1.248002	1.699458	1.057475	1.248002	1.699458
Integrin beta1	1.250079	1.063534	1.067533	1.802605	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226	1.074226
Insulin-like growth factor binding protein 5	0.912191	1.053215	1.067072	1.159317	1.0817872	1.0349437	1.109334	1.0723098	0.8672726	1.5311468	3.6316793	0.8225968	0.8672726	3.6316793	0.8225968
Phase-1 RCT-76	1.0801893	1.0417635	0.94826	1.1913363	0.8323475	0.7851379	0.8347074	1.0423884	1.046403	1.1938875	1.5188541	1.0265294	1.1938875	1.5188541	1.0265294
Fam11n H-chain	1.0806979	0.813985	0.7783866	0.5116735	0.8024856	0.8323475	0.7851379	0.8347074	1.0423884	1.046403	1.1938875	1.5188541	1.0265294	1.1938875	1.5188541
Selenomethionine P	1.89221406	0.852912	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866
FTENMACH	0.89221406	0.852912	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866	0.83762866
Phase-1 RCT-214	0.9156983	1.1353833	0.83929185	1.053995	0.84031105	0.8970406	1.040253	0.9603848	1.0089455	1.0089455	0.86539116	0.8430624	1.0089455	0.86539116	0.8430624
Phase-1 RCT-112	0.79772407	0.9247144	0.85929185	1.053995	0.84031105	0.8970406	1.040253	0.9603848	1.0089455	1.0089455	0.86539116	0.8430624	1.0089455	0.86539116	0.8430624
Thymidine synthase	0.7456176	0.6919495	1.0591552	0.877337	0.9519038	1.1447592	1.040253	0.9603848	1.0089455	1.0089455	0.86539116	0.8430624	1.0089455	0.86539116	0.8430624
Phase-1 RCT-13	1.017478	0.6757435	0.4644087	1.002337	0.6016421	0.63302453	0.5557376	1.9467292	1.0815134	0.5936622	0.3977387	0.8700164	0.5936622	0.3977387	0.8700164
Nucleosome assembly protein	1.4084079	0.80287485	1.121329	0.5443574	0.8780707	0.6208802	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349
Cholesterol 7-alpha-hydroxylase (P450 VII)	0.78174174	1.0538087	1.121329	0.5443574	0.8780707	0.6208802	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349	1.0650349
Vesicular monoamine transporter (VMAT1)	0.8143193	0.980173	0.9403008	0.73534	0.9110027	1.096688	1.0271381	0.7704732	0.6820128	0.					

Phase-1 RCT-32	1.0548155	1.3393801	0.9282183	0.988223	0.9328064	1.3367351	1.3092543	0.85531319	0.7862883	1.21584	1.261042	1.265307	0.8554572	0.9476693
Protonema assembly factor 1	1.0196894	1.3155174	1.2003325	1.3982524	1.3057484	1.3074478	1.3074478	0.6364167	0.9433873	0.9626882	1.0911087	0.9631607	0.9870814	0.88944514
Procarboxin DNA glycosylase	0.8317676	1.0248191	0.8665564	1.9583476	1.0420711	1.1352766	1.1352766	0.9362047	0.9362047	0.9362047	0.9362047	0.9362047	0.9362047	0.9362047
Phase-1 RCT-42	0.9305265	1.0115731	0.9684414	0.8763434	0.9581684	0.9980777	0.9980777	1.0203491	0.9748578	0.9748578	0.9748578	0.9748578	0.9748578	0.9748578
North PIG	0.8260846	1.2470636	1.0033809	0.4678518	1.3527655	0.8409087	0.8409087	1.071108	1.1553266	1.1553266	1.1553266	1.1553266	1.1553266	1.1553266
Phase-1 RCT-184	1.1560822	0.9647128	0.9402313	0.77889895	1.1062593	0.8346494	0.8346494	0.8902177	1.021316	1.021316	1.021316	1.021316	1.021316	1.021316
Phase-1 RCT-188	1.4046267	0.8186531	0.8805101	0.8071093	0.7732947	0.8235197	0.8235197	0.8664734	1.0231923	1.0231923	1.0231923	1.0231923	1.0231923	1.0231923
Phase-1 RCT-119	0.83238113	1.0210013	0.9362207	0.9537554	0.99517584	0.9582984	0.9582984	0.8374936	0.8749112	0.8749112	0.8749112	0.8749112	0.8749112	0.8749112
Carbonic anhydrase II	0.8243768	0.83863803	0.9737886	0.8070734	1.00115317	1.0524276	1.0524276	0.9374908	0.9374908	0.9374908	0.9374908	0.9374908	0.9374908	0.9374908
Trypanthion hydrolase	0.9430932	0.86198455	0.90393	0.8467741	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035
Phase-1 RCT-171	0.9400395	0.86773384	0.8090476	0.9820076	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035
Phase-1 RCT-179	1.3420126	1.0695516	0.97895844	0.9154271	1.1871173	0.91024613	0.91024613	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035	0.9258035
Phase-1 RCT-161	0.9530185	1.0479895	1.3384655	2.2109539	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655	1.3384655
Phase-1 RCT-207	0.82208135	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348	1.3633348
Phase-1 RCT-144	1.2703614	1.0003207	0.7107875	1.2529523	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525	1.1527525
Phase-1 RCT-225	0.52468873	0.8234486	0.8845654	0.9464238	1.105311	1.105311	1.105311	1.105311	1.105311	1.105311	1.105311	1.105311	1.105311	1.105311
Oxythrom P460 2E1	1.0568753	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593	0.9380593
UD-1	0.9311806	1.0331286	1.082014	0.9738368	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154	0.86602154
Thiobutidin-1 (Tbx1)	1.1132468	0.9263502	0.8246376	0.9475777	0.90683959	0.9475777	0.9475777	0.9475777	0.9475777	0.9475777	0.9475777	0.9475777	0.9475777	0.9475777
Carbonic anhydrase III	0.32292527	0.86878123	1.23965	0.29666385	0.5571008	0.2518858	0.2518858	0.3976953	0.9623853	0.9623853	0.9623853	0.9623853	0.9623853	0.9623853
Phase-1 RCT-140	0.91730454	0.84205164	0.89145338	0.9591176	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587	0.8483587
Complement component C3	0.65432784	0.8417879	0.7891465	0.46946252	0.7633718	0.3221983	0.3221983	0.824458	0.7608884	0.7608884	0.7608884	0.7608884	0.7608884	0.7608884
Glucokinase	0.7676593	0.99662117	1.0107342	1.3095936	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578	1.0073578
3-methyladenine DNA glycosylase	1.1675475	1.0787788	0.8920573	0.8944138	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358	0.8213358
Periplasmic multidimensional enzyme type II	0.84561366	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689	0.8116689
Phase-1 RCT-40	0.45774794	0.811003	1.0388728	0.3999796	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155	0.9343155
Sensitization marker protein-30	2.0401466	1.0510112	0.9224387	1.1515248	1.0075025	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197
Cytin G	1.0544521	0.98391473	0.9224387	1.1515248	1.0075025	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197	1.010197
Melanoma-associated antigen ME491	1.0809182	1.0810971	1.222569	0.7263309	1.025147	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433
Phase-1 RCT-28	1.0989051	1.1750721	1.022569	0.7263309	1.025147	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433
Enolth	0.8071008	0.8071008	1.022569	0.7263309	1.025147	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433
Acidic dehydrogenase 1	0.5404785	0.8031972	1.0344145	0.55442657	0.74081965	0.630748	0.630748	0.630748	0.630748	0.630748	0.630748	0.630748	0.630748	0.630748
Sic1 cell factor	0.8071008	0.8071008	1.022569	0.7263309	1.025147	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433	1.2775433
JNK1 stress activated protein kinase	0.82228845	0.8562837	0.85003716	0.9357356	0.874205	0.8049875	0.8049875	0.8049875	0.8049875	0.8049875	0.8049875	0.8049875	0.8049875	0.8049875
Protein tyrosine phosphatase alpha	0.9518844	1.0817035	0.92352265	1.6488018	1.3583592	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782
Phase-1 RCT-55	1.623565	0.9003094	1.083667	1.4557115	1.0684187	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782	1.1089782
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.8817445	0.78565176	0.9415337	0.84857674	0.93079346	0.6883741	0.6883741	0.6883741	0.6883741	0.6883741	0.6883741	0.6883741	0.6883741	0.6883741
DNA topoisomerase I	0.8945949	1.0679547	1.039404	0.7693846	0.6883741	1.1255198	1.1255198	1.1255198	1.1255198	1.1255198	1.1255198	1.1255198	1.1255198	1.1255198
Phase-1 RCT-280	1.063506	1.2098013	1.039717	3.744806	1.2219846	1.1624682	1.1624682	1.1624682	1.1624682	1.1624682	1.1624682	1.1624682	1.1624682	1.1624682
Superoxide dismutase Mn	1.12632	1.276248	1.1843134	0.87101716	1.24872	0.94328815	0.94328815	0.94328815	0.94328815	0.94328815	0.94328815	0.94328815	0.94328815	0.94328815
Beta-tubulin, class I	0.67668124	1.3469228	1.040604	0.9154805	1.3506993	1.3515985	1.3515985	1.3515985	1.3515985	1.3515985	1.3515985	1.3515985	1.3515985	1.3515985
Carbamyl phosphate synthetase I	0.9878521	1.0973259	1.1501167	1.290102	1.1359074	1.2290732	1.2290732	1.2290732	1.2290732	1.2290732	1.2290732	1.2290732	1.2290732	1.2290732
Dialcylglycerol kinase zeta	1.118483	0.88925373	0.84489457	2.9338884	1.2411463	1.271702	1.271702	1.271702	1.271702	1.271702	1.271702	1.271702	1.271702	1.271702
Phase-1 RCT-141	0.96587874	1.1426883	1.1011855	0.9550894	1.2807937	1.168954	1.168954	1.168954	1.168954	1.168954	1.168954	1.168954	1.168954	1.168954
14-3-3 zeta	1.1310892	1.075411	0.9630288	1.9864286	1.675688	1.141447	1.141447	1.141447	1.141447	1.141447	1.141447	1.141447	1.141447	1.141447
Gammacell, cytoplasmic	1.6080854	0.796548	1.1162287	1.2794975	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522	1.1625522
Ribosomal protein L13A	1.488872	0.842523	0.97658194	1.254304	0.81878294	1.1602532	1.1602532	1.1602532	1.1602532	1.1602532	1.1602532	1.1602532	1.1602532	1.1602532
Itih-a	0.8774497	0.9884735	1.0161941	0.7652401	1.11602532	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559
Phase-1 RCT-85	0.7570067	0.9660422	0.9228222	1.2308091	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559	1.1537559
C-Jun	0.9228086	0.8547042	0.8843122	0.9250265	0.91023266	0.8723544	0.8723544	0.8723544	0.8723544	0.8723544	0.8723544	0.8723544	0.8723544	0.8723544
Protein O-mannosyltransferase 1 (Pom1)	0.95228163	1.171152	1.2720191	0.9863217	1.2681873	1.1595472	1.1595472	1.1595472	1.1595472	1.1595472	1.1595472	1.1595472	1.1595472	1.1595472
HMG CoA reductase	1.0503367	1.2816493	1.1664319	0.9564905	1.1451154	0.94481623	0.94481623	0.94481623	0.94481623	0.94481623	0.94481623	0.94481623	0.94481623	0.94481623
Interferon related developmental regulator (IRD1)	0.87228435	1.031074	0.9722404	1.1770304	1.024626	1.0792588	1.0792588	1.0792588	1.0792588	1.0792588	1.0792588	1.0792588	1.0792588	1.0792588
PC4	1.2970307	0.85179946	1.0244175	1.1358425	1.374885	1.2818805	1.2818805	1.2818805	1.2818805	1.2818805	1.2818805	1.2818805	1.2818805	1.2818805
Glucose-regulated protein 78	1.2740374	0.8914076	1.018163	0.9779786	1.027585	0.89142776	0.89142776	0.89142776	0.89142776	0.89142776	0.89142776	0.89142776	0.89142776	0.89142776
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	1.2042724	0.90217465	1.178977	0.9716208	0.88807535	0.9719476	0.9719476	0.9719476	0.9719476	0.9719476	0.9719476	0.9719476	0.9719476	0.9719476
Caspase 6	0.80849165	1.0481864	0.89927715	0.9173954	0.8910572	0.91860455	0.91860455	0.91860455	0.91860455	0.91860455	0.91860455	0.91860455	0.91860455	0.91860455
Phase-1 RCT-169	0.87080265	0.89559096	0.9376054											

Phase-1 RCT-72	1.0118543	0.9829044	0.98510122	1.0245181	0.6446894	0.874147581	0.96408504	0.86378324	0.8814218	0.89416426	0.7568346	0.85603005	1.0558915
Pyruvate kinase, muscle	2.1755231	1.0025908	0.9731376	1.4424866	1.0480223	1.1268831	1.2086531	1.2165268	1.2497878	1.27783494	1.1068248	0.84674287	
Phase-1 RCT-286	1.0046732	1.057068	1.0487127	0.9205087	0.9205087	0.9205087	0.9205087	0.9205087	0.9205087	0.9205087	0.9205087	0.9205087	
Phase-1 RCT-286	0.95327385	1.016956	0.9318073	0.9891374	0.91696344	0.91696344	0.91696344	0.91696344	0.91696344	0.91696344	0.91696344	0.91696344	
Cytochrome P450 2C39 (alternate clone 2)	1.8794191	1.0716373	0.8774895	0.98411363	0.98411363	0.98411363	0.98411363	0.98411363	0.98411363	0.98411363	0.98411363	0.98411363	
Phase-1 RCT-280	0.87587405	2.255794	1.6978911	2.188432	2.188432	2.188432	2.188432	2.188432	2.188432	2.188432	2.188432	2.188432	
Phase-1 RCT-281	1.2246596	1.004425	1.1978393	1.2615714	1.2615714	1.2615714	1.2615714	1.2615714	1.2615714	1.2615714	1.2615714	1.2615714	
Phase-1 RCT-281	0.8641221	0.9586337	0.9439607	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	
Methylglucosyl-CoA reductase alpha	0.9774121	0.9586337	0.9439607	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	0.9359593	
Cytochrome P450 1A2	1.7173171	1.092846	0.9628014	0.91444594	0.91444594	0.91444594	0.91444594	0.91444594	0.91444594	0.91444594	0.91444594	0.91444594	
Monomine oxidase B	0.6403553	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	
Phase-1 RCT-264	0.6403553	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	0.9257053	
Perforin/proliferator activated receptor gamma	1.0386786	0.8349734	0.86553216	0.9714876	0.9714876	0.9714876	0.9714876	0.9714876	0.9714876	0.9714876	0.9714876	0.9714876	
Phase-1 RCT-143	0.9524612	1.603362	0.9811057	0.777485	0.777485	0.777485	0.777485	0.777485	0.777485	0.777485	0.777485	0.777485	
Phase-1 RCT-117	0.85733163	1.0416765	1.1108713	0.9557821	0.9557821	0.9557821	0.9557821	0.9557821	0.9557821	0.9557821	0.9557821	0.9557821	
Glutathione S-transferase (hba-1)	1.0369194	1.0569121	1.2086821	0.9801523	0.9801523	0.9801523	0.9801523	0.9801523	0.9801523	0.9801523	0.9801523	0.9801523	
Phase-1 RCT-148	1.2537676	1.0522951	1.0250688	0.6144635	0.6144635	0.6144635	0.6144635	0.6144635	0.6144635	0.6144635	0.6144635	0.6144635	
Phase-1 RCT-142	1.057098	1.0352661	1.1254553	0.9855635	0.9855635	0.9855635	0.9855635	0.9855635	0.9855635	0.9855635	0.9855635	0.9855635	
AdhA receptor type II	1.142334	1.090966	1.1443226	1.1127478	1.1127478	1.1127478	1.1127478	1.1127478	1.1127478	1.1127478	1.1127478	1.1127478	
Glycine methyltransferase	0.91371286	0.9505214	0.89020735	0.8709767	0.8709767	0.8709767	0.8709767	0.8709767	0.8709767	0.8709767	0.8709767	0.8709767	
Phase-1 RCT-261	1.4339557	1.1618968	1.0135316	0.6883638	0.6883638	0.6883638	0.6883638	0.6883638	0.6883638	0.6883638	0.6883638	0.6883638	
Ciliary neurotrophic factor	0.98203814	0.9579517	0.8628604	1.0871693	1.0871693	1.0871693	1.0871693	1.0871693	1.0871693	1.0871693	1.0871693	1.0871693	
Gap junction membrane channel protein beta 1 (Gph1)	1.0237556	1.4510803	1.1675835	0.8205248	0.8205248	0.8205248	0.8205248	0.8205248	0.8205248	0.8205248	0.8205248	0.8205248	
Phase-1 RCT-86	1.122567	1.056653	0.9494932	1.1775441	1.1775441	1.1775441	1.1775441	1.1775441	1.1775441	1.1775441	1.1775441	1.1775441	
Phase-1 RCT-287	1.050291	0.8157626	0.82136765	0.83284607	0.83284607	0.83284607	0.83284607	0.83284607	0.83284607	0.83284607	0.83284607	0.83284607	
Refining-binding protein (RBP)	1.156136	0.7876881	0.9072461	0.6048515	0.6048515	0.6048515	0.6048515	0.6048515	0.6048515	0.6048515	0.6048515	0.6048515	
Very long-chain acyl-CoA synthetase	1.3965394	0.900662	0.8435545	0.801205	0.8434326	0.8434326	0.8434326	0.8434326	0.8434326	0.8434326	0.8434326	0.8434326	
Synaptobrevin	0.95045575	0.93034306	0.645806	0.88116534	0.9034041	0.9034041	0.9034041	0.9034041	0.9034041	0.9034041	0.9034041	0.9034041	
Phase-1 RCT-145	1.0851953	1.105365	1.0091622	0.9071902	0.9071902	0.9071902	0.9071902	0.9071902	0.9071902	0.9071902	0.9071902	0.9071902	
Avin	0.6354363	0.974951	1.1750597	1.593195	1.593195	1.593195	1.593195	1.593195	1.593195	1.593195	1.593195	1.593195	
Phase-1 RCT-89	0.9553437	0.9305275	0.8275154	0.4684353	0.4684353	0.4684353	0.4684353	0.4684353	0.4684353	0.4684353	0.4684353	0.4684353	
Sarcoplasmic reticulum calcium ATPase	0.8593393	0.8214638	0.8593171	0.7674784	0.7674784	0.7674784	0.7674784	0.7674784	0.7674784	0.7674784	0.7674784	0.7674784	
Alpha-2-macroglobulin, sequence 2	0.85240194	0.82527684	0.8753964	1.212572	0.945063	0.8576526	0.8576526	0.8576526	0.8576526	0.8576526	0.8576526	0.8576526	
Phase-1 RCT-204	1.0334567	1.104904	1.0693393	0.9495748	0.9495748	0.9495748	0.9495748	0.9495748	0.9495748	0.9495748	0.9495748	0.9495748	
Vascular endothelial growth factor	0.9501822	1.0533599	0.98624706	1.118024	1.118024	1.118024	1.118024	1.118024	1.118024	1.118024	1.118024	1.118024	
NADP-dependent isocitrate dehydrogenase, cytosolic	1.0897419	1.0848008	1.1678219	0.6985109	0.97968036	0.93195057	0.80026275	0.90098015	0.87803525	0.988067	0.924791	0.8056212	0.84157944
DNA binding protein inhibitor ID2	1.038497	1.1187531	1.1386202	1.0715445	0.89987254	0.815015	1.2181273	1.0933567	0.9080527	1.791908	1.4152632	1.2472408	0.9274026
Glutathione S-transferase Ya	0.719921	0.9650531	1.0960590	0.5198861	0.43631626	0.5376126	0.7627788	0.8776264	1.0122315	0.74221173	1.0378073	0.9319775	0.820374
Epoxide hydratase	1.0481632	1.1256438	1.8871501	0.7502615	0.959747	1.649643	1.8672048	0.60362758	1.373205	0.9289257	0.69502753	0.87680745	0.88831706
Insulin-like growth factor I	1.3424655	1.0183394	0.9383351	0.9594552	0.9308215	1.0324275	0.76862437	1.0233635	1.3533118	0.70824465	0.8142207	1.2256976	1.0354795
Prostaglandin H synthase	1.3278897	1.0478034	0.9386511	2.1581884	1.165728	1.79606	1.2700387	1.003448	1.9554908	0.9036809	0.95760095	1.2014072	1.3783482
Phase-1 RCT-137	1.0586426	1.055662	1.0352151	0.6394864	0.9730046	0.90001575	0.8297249	0.688592	0.9837137	1.2176254	1.118846	1.032666	1.086635
Phase-1 RCT-137	0.901741	0.95652174	0.85032016	0.8284514	0.8284514	0.8284514	0.8284514	0.8284514	0.8284514	0.8284514	0.8284514	0.8284514	
Hepatic lipase	1.139086	1.1391952	1.0710881	0.9157022	1.0743596	0.9105293	0.7867615	0.916953	0.73816464	1.107413	0.8943945	0.8563213	0.7154592
Phase-1 RCT-138	0.7033045	1.1043375	1.0917382	0.4205859	0.91494237	1.0286888	0.7387615	0.916953	0.73816464	1.107413	0.8943945	0.8563213	0.7154592
Phase-1 RCT-164	0.8045985	1.1987424	1.0919951	1.1603387	1.1490577	1.151005	1.0062108	0.9505151	0.91520864	1.2007323	0.92568797	0.8702608	0.86747736
Acyl-CoA dehydrogenase, medium chain	1.1406224	0.9393812	1.0459981	0.8714026	0.8133832	0.97958314	1.0044044	0.9406321	1.1768102	0.8940393	1.0346397	1.378025	1.3642242
Glutathione S-transferase Yb2 subunit	0.8428107	0.94495404	0.8460725	0.6703312	0.8205783	0.59725964	0.6158308	1.249025	1.1768102	0.8940393	1.0346397	1.378025	1.3642242
Carbonic dehydratase	1.0151047	1.1452755	1.0865426	0.8387497	0.8387497	0.8387497	0.8387497	0.8387497	0.8387497	0.8387497	0.8387497	0.8387497	
Phase-1 RCT-166	0.9782287	0.7674391	0.93594466	0.520435	0.44982728	0.63179284	0.3776657	0.3776657	0.3776657	0.3776657	0.3776657	0.3776657	
Angiotensinogenase	1.3424404	0.7481154	0.8787755	0.7637772	0.8445987	1.0833381	0.9587268	0.9587268	0.9587268	0.9587268	0.9587268	0.9587268	
UDP-glucosyltransferase	0.6883051	1.076283	1.1403731	0.690248	0.690248	0.690248	0.690248	0.690248	0.690248	0.690248	0.690248	0.690248	
Glutathione S-transferase P1	1.0531287	0.72904564	0.8800928	0.8041568	0.8041568	0.8041568	0.8041568	0.8041568	0.8041568	0.8041568	0.8041568	0.8041568	
Insulin-like growth factor related protein (IGRP)	0.987036	0.9860597	1.0550209	0.7019476	1.0615469	1.1452767	0.917265	0.650768	1.3038568	1.2182788	0.9587865	0.9243682	0.93987273
Robosamin protein L13	1.049586	0.9601224	0.7880455	1.3433268	0.87534136	0.9135381	0.84828687	0.8624907	0.90256336	0.9781555	0.6692177	0.9157278	1.3128738
Carcinogen	1.269182	1.2723142	0.9353972	2.0776381	1.6195557	1.5153796	1.1820291	1.1198063	0.9263414	1.0772283	1.5149103	1.6189203	1.3418119

Table 28

Phase-1 RCT-3	1.1663597	0.95777655	1.0214881	1.0137228	1.0078111	1.0540735	0.95478487	0.9223873	0.8555609	0.8625213	0.8190114	0.95590775
Phase-1 RCT-3	0.9234057	1.2524529	1.0737082	1.083496	0.9650785	1.0522718	1.098533	1.1103849	0.9887324	0.77444455	1.1571548	0.8593089
3-hydroxybutyrate dehydrogenase	1.3835335	0.9145042	0.9245482	0.7180158	0.9859395	0.7425317	0.934363	1.181341	0.9919456	1.222241	1.2302622	0.99220726
Carbonic anhydrase III, sequence 2	0.9911628	0.86991266	0.8597594	0.7542659	1.0446381	0.9685391	1.0004046	0.7714339	1.1411901	0.6507702	0.7007606	0.8574335
Phase-1 RCT-10	1.081552	1.1311984	1.0811348	0.65352345	1.0446381	0.9685391	1.0004046	0.7714339	1.1411901	0.6507702	0.7007606	0.8574335
Phase-1 RCT-10	1.286819	0.8014371	0.701739	1.1252219	0.6723482	0.55756287	1.1629821	0.8907103	0.65433283	0.9873243	0.91443324	1.5734885
Alpha-2-microglobulin	0.8431667	1.0253592	1.0264208	1.4533957	1.107459	1.2143362	1.1629821	0.8907103	0.65433283	0.9873243	0.91443324	1.5734885
Dynamin-1 (D100)	0.8360915	1.0943355	0.894294	0.842374	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Uryl oxidase	0.7683028	1.0092534	1.035392	1.568702	1.3734831	0.8913679	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-252	1.1813278	1.1503222	0.9317165	0.780281	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-29	1.034946	1.2274549	0.952183	0.7683028	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-278	1.2023827	1.1570387	1.1321098	0.9636693	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-42	0.86940813	0.8949994	0.8931786	0.7206984	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-25	1.0635163	1.1671782	0.8547936	1.2303684	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Cytochrome P450 2C11	1.0355985	0.8699159	0.9543529	0.7206984	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-202	1.5255425	0.9620214	0.8248876	0.9175603	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Complement factor (C3)	0.8539039	1.0279797	0.9237141	1.385143	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Proliferating cell nuclear antigen gene	1.0154415	1.4913332	0.97356844	1.5041813	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Activating transcription factor 3	0.8365915	1.0372815	1.0391338	0.7344732	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Focal adhesion transcription factor-1	0.8365915	1.0372815	1.0391338	0.7344732	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-289	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270	1.0304173	0.9408271	0.8649418	1.3281765	1.034115	0.9315292	0.8121771	1.1203347	0.76059236	0.82331854	0.8034855	1.2977449
Phase-1 RCT-270</												

Organic cation transporter 3	1.5014112	0.96937604	1.1944558	1.3116	1.0286026	1.1544863	1.0537571	0.8558615	0.8695404	0.840578	0.9259863	0.7452261	0.8223234	0.98356926
Hypoxia-inducible factor 1 alpha	0.91960164	1.1338121	1.01635916	1.111922	1.2057654	1.1810203	1.1585556	0.7455033	0.6811855	0.8684495	0.91325945	0.7478085	0.771882	1.1336763
Phase-1 RCT-43	1.0344378	1.1421859	1.0841577	1.1342176	1.1320881	1.0753771	1.0937008	1.00973	0.9888559	0.9076973	1.1851399	0.89155596	0.79115915	1.0398039
Phase-1 RCT-45	1.0004749	1.0981597	1.0037135	1.1881278	1.1042911	1.0548273	1.1172342	0.9645755	0.8007338	0.9067723	1.0885154	0.90414584	0.7674184	0.9809718
Malate dehydrogenase, cytosolic	0.8338453	0.8339579	0.93475248	0.98918958	1.0464104	1.0232398	1.1243494	0.8527522	1.1403135	1.0257226	1.3567809	1.1645244	1.3695538	1.4909577
VL30 element	0.74078804	0.8693501	1.4827163	1.3432841	1.2813983	0.74082094	0.49235648	1.150825	0.8713443	0.92647445	1.6004578	1.1016504	0.7959885	1.9064653
Phase-1 RCT-189	0.75715715	1.2335457	1.0703472	0.7346783	1.2837465	1.2209598	1.2162031	0.81447446	0.8200388	0.8676954	1.0816386	1.1010633	0.9498167	0.9405541
Alfa-fetoprotein	1.006354	0.909449	0.92068894	0.9449799	0.9440124	0.9247228	0.9894068	0.85105394	1.1201938	0.8589815	1.1074455	0.81708974	0.89068616	1.0537889
Calgranulin B	1.001575	0.91816854	0.9518699	0.76015025	0.8186104	0.7977693	0.9940368	1.0361183	1.0419376	1.3741081	1.0389505	1.3857212	1.1361406	0.8523126
Phase-1 RCT-195	0.96035516	1.0526527	1.0376845	0.8314118	0.8814535	0.87502503	0.92408	0.9403509	0.903944	0.87900784	0.8459174	0.97115426	0.88332814	0.8565883
Tissue plasminogen activator	1.0943178	0.9286166	1.0376845	0.79827714	0.9467667	0.92271905	0.90423584	1.0715589	1.2396632	1.07381	1.271378	1.154452	1.3251688	1.0754705
Liver fatty acid binding protein	1.2884033	0.9337924	1.0223674	0.9435226	0.9884643	1.033638	0.80891544	1.0673943	1.0473549	0.99302628	1.165283	0.8797018	0.9012747	0.9562955
Alpha-1 microglobulin/bikunin precursor (Arb0)	0.9492544	1.0951104	0.97223065	0.9597859	1.0216125	0.9862955	1.0357941	1.3223672	0.88722118	0.96159446	1.512124	1.2920718	1.2138562	0.94952595
Phase-1 RCT-151	1.076741	1.2162556	1.0780443	1.194264	1.3225298	1.3899702	1.0534559	0.86888564	0.8356072	0.9283078	0.8838912	0.78488614	0.8007601	1.0428725
Phase-1 RCT-158	1.0755467	0.9750239	1.103459	1.1246943	1.0189245	0.9834673	0.980653	1.0138435	1.1687772	1.1242981	1.1581108	1.2108594	1.0200552	1.0277013
Phase-1 RCT-235	1.1176978	0.94017607	1.1055647	1.2442632	0.9987655	1.0100876	1.0057018	1.0158168	1.0140408	1.0140408	1.1555163	0.6982739	0.95665634	1.2671851
Organic anion transporter 3	0.8575787	1.10963	1.0372127	0.9299071	0.788692	0.8453173	0.8890938	0.9577048	1.0354248	1.0140408	1.1555163	0.6982739	0.95665634	1.2671851
Mitox metalloproteinase-1	1.1856462	0.8307637	0.7699087	0.79176176	0.79886425	0.7848874	0.9128493	1.2903298	1.198823	1.0354248	1.5083003	1.2799987	1.3507673	0.81859463
Urinary protein 2 precursor	0.686904	0.7284542	0.72882764	0.54337156	0.6997538	0.69500336	0.7131872	0.74953825	0.854122	0.844604	0.8555526	0.9844834	1.0522751	1.0879878
Phase-1 RCT-212	0.8524616	0.8273309	0.85521774	0.99730897	0.8605356	0.9675283	0.9095514	0.98279405	0.9522059	1.0293903	1.0131068	0.8411048	0.9560428	0.8542072
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 1B).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes-neo, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 1B and as included in Table 26)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)

Phase-1 RCT-32	1.2240198	0.7983475	0.93072046	0.92193305	0.93404498	1.0836318	1.8185769	1.4824212	1.352119	1.2394242	1.0106953	1.2120258	1.241053	1.223437
Parasome assembly factor 1	1.1734082	0.9975077	0.99916274	1.0791085	1.4471468	1.0476531	1.0480261	1.036018	1.1365564	1.4047085	1.4471708	1.1253168	1.238298	
2-oxoglutarate DNA glycosylase	1.3403545	0.92793554	1.06715586	0.9813061	0.84329057	1.0831871	1.1418744	1.1355017	1.1671423	0.8547052	0.8592383	1.1389185	0.917822	
Phase-1 RCT-42	0.9709383	0.88946215	0.8716255	1.0724642	0.9305712	0.9942754	0.9654733	1.0147123	0.8222622	0.8019152	0.7815927	0.880585	0.9457114	0.8072515
Martin F6	1.070721	0.9985944	1.2887024	0.9595495	0.9535549	0.8950133	0.8951244	0.9143867	0.4002295	0.5204372	0.6219236	0.8973353	0.917637	0.9693495
Phase-1 RCT-184	0.80285944	0.83827645	0.95800536	0.8955905	0.8535549	0.8950133	0.8951244	0.9143867	0.4002295	0.5204372	0.6219236	0.8973353	0.917637	0.9693495
Phase-1 RCT-168	0.7102844	0.76287436	0.7195107	0.7088559	0.5709583	0.88917226	0.99589478	0.7695063	0.6406413	0.6975219	0.754807	1.0584272	1.031299	1.0356401
Phase-1 RCT-119	1.0359875	1.2203325	1.5088365	0.9571712	1.1788049	1.0091828	0.99589478	0.7695063	0.6406413	0.6975219	0.754807	1.0584272	1.031299	1.0356401
Carbonic anhydrase II	1.8001194	1.2443522	0.80360675	1.15119137	1.1525985	0.915339705	0.915339705	0.915339705	0.915339705	0.915339705	0.915339705	0.915339705	0.915339705	0.915339705
Thiolipase	0.74321423	0.9135288	1.1381304	0.8054801	0.97723347	0.9127301	0.9082804	0.8906602	0.8327201	0.7946688	1.137472	1.1390775	0.70542115	1.2280815
Phase-1 RCT-71	0.8617553	0.90405464	1.1807425	1.4632176	1.5235918	0.9734769	0.90475434	0.943261	1.4111116	1.0318848	1.047232	1.5072593	1.1855267	1.3177061
Phase-1 RCT-167	0.87235326	0.9523474	0.8622563	0.7153452	0.41943187	1.048907	0.98414695	0.8954104	0.2678724	1.0693409	0.9890504	0.9592806	1.0277698	1.0204151
Phase-1 RCT-207	1.202655	0.8959706	1.1011415	1.091803	1.0794051	0.96551424	0.9223884	0.9361137	1.2593434	1.0693409	0.9890504	0.9592806	1.0277698	1.0204151
Phase-1 RCT-144	1.1833651	1.0534021	1.0354841	1.4663024	1.6042608	1.1374668	0.9307443	1.8356702	0.3948665	0.5094557	0.7919406	0.8833925	1.3970246	0.949782
Phase-1 RCT-225	0.981434	0.6906367	0.9082911	0.8939324	0.9082911	0.8939324	0.8939324	0.8939324	0.8939324	0.8939324	0.8939324	0.8939324	0.8939324	0.8939324
Cytochrome P450 2E1	0.9444084	0.8630553	0.5715576	0.5324465	0.5535707	1.1385325	1.1242465	1.1242465	1.1242465	1.1242465	1.1242465	1.1242465	1.1242465	1.1242465
D-1	1.2434453	0.862674	0.9228274	0.94203585	0.93175	0.916449	1.284487	1.1019382	1.075317	1.3895617	1.1907985	0.6945146	0.79780364	0.820941
Thioredoxin-1 (Trx1)	1.2434453	0.862674	0.9228274	0.94203585	0.93175	0.916449	1.284487	1.1019382	1.075317	1.3895617	1.1907985	0.6945146	0.79780364	0.820941
Carbonic anhydrase III	0.87874966	1.6809688	1.1941285	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968
Phase-1 RCT-140	1.049482	0.9804664	0.92897185	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968	0.9317968
Complement component C3	0.87598103	1.0219176	1.2655581	1.3955281	1.4282667	0.87813973	1.1188988	1.0403983	1.1705262	1.2021538	1.1601868	1.1431789	0.855456	1.2888001
Glucanase	2.0241113	0.71657413	1.2568168	0.9717113	0.47413266	0.9263198	1.0452824	1.0891162	0.17827472	0.6398536	0.5122063	0.4392007	1.0890962	0.7779827
Phase-1 RCT-173	1.1316072	1.002172	0.8278406	0.8215004	0.7439045	0.8722768	0.7082595	0.8787341	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
3-methylcrotonyl DNA glycosylase	1.5303708	1.3082323	0.8391614	0.95079138	0.8763274	1.0540717	1.1021765	1.0556712	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
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Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
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Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
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Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062	1.1154138	1.0727375	0.8266418	1.0383184	0.9635716	1.290238	0.8920458	0.9157869	0.85585105	0.99130285	0.97110593
Proteinase-1	0.9293192	1.0389504	1.1712062											

1.128688	Phase-1 RCT-172	1.087037	1.097165	1.017804	0.94069554	0.9806913	0.86594754	1.0880735	0.5626991	0.8767434	0.84131676	0.8331942	0.8613436
1.0628319	1.7241072	0.9318063	0.022068	1.1655587	0.58724656	1.7080805	0.9006974	1.25459635	1.7085392	0.9595308	1.1542998	0.95986237	1.00115913
0.8623152	0.93459453	0.7857234	0.572063	0.8932388	0.40914235	0.8932388	0.8025604	0.9696937	0.5696937	0.5696937	0.742247	1.1300107	0.95986237
Phase-1 RCT-90	1.1932207	1.060606	0.986161	1.179868	0.9506722	1.0147324	0.9445512	0.5943568	1.0001715	0.7841719	1.2671229	0.8928271	0.95986237
1.1113084	0.4046368	0.54885	0.41555165	1.7247967	0.9871481	0.989419	0.8670053	0.8934552	0.9184394	1.276123	1.2043925	0.93534213	0.93534213
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	1.2645729
1.0911269	1.9369725	1.053583	1.1446802	1.2040591	0.95757395	0.91863193	0.9283535	1.0052768	0.9479606	1.0276247	1.031207	1.0468974	1.0468974
1.1146036	1.0744571	1.0593583	1.3727278	0.8271154	1.0718404	1.247793	0.9039331	1.1331346	0.9584363	1.068566	1.0681307	1.1027538	1.0681307
1.0596866	0.85531914	0.8470826	0.80241155	1.0682448	1.2854794	1.104573	1.1083681	0.97819328	1.2443178	1.1017288	0.9380794	1.2645729	

Phase-1 RCT-3	0.9249347	1.036051	0.9514012	0.9192086	0.9483822	1.0373192	1.0655747	1.1278121	1.0392123	1.0374925	1.0119382	0.88250834	0.8702423	1.0808749
Fetuin beta (Fetuin)	0.5530327	0.81741168	0.9333624	0.7504538	0.72925166	0.92487146	0.9755356	0.9091958	1.398638	1.359	1.707976	0.88250834	0.8702423	1.0808749
3-hydroxyisovalerate dehydrogenase	0.8198423	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313	0.8534313
Carbonic anhydrase III, sequence 2	0.4570282	0.89746313	0.75339115	0.8947917	0.9202898	0.9175007	0.8679146	0.8679146	0.8679146	0.8679146	0.8679146	0.8679146	0.8679146	0.8679146
Phase-1 RCT-10	0.8080866	0.95553493	0.7370394	0.9101236	0.85776204	0.8322569	0.84011861	0.84011861	0.84011861	0.84011861	0.84011861	0.84011861	0.84011861	0.84011861
Alpha-2-microglobulin	1.2169166	1.8917271	1.3037228	1.9663685	0.7905545	0.7357068	0.6764157	0.53229684	0.8013108	1.7183639	1.5089017	1.2955288	0.5547428	0.5062722
Dynamin-1 (D100)	0.8877086	1.1909509	1.095952	0.7853451	0.4305045	0.817142	0.4265808	0.8882241	0.83226578	0.88224705	0.8372264	1.00552	0.8224978	0.6594009
Uryl oxidase	1.0913305	1.428218	1.1038872	1.335399	1.2841523	1.025924	0.9017847	0.7653904	0.94341	0.83226578	0.8882241	0.8372264	1.00552	0.6594009
Phase-1 RCT-282	0.8562387	1.3124163	1.426752	1.2343107	1.213291	1.295915	1.0716353	1.3415221	1.025924	0.9017847	0.7653904	0.94341	0.83226578	0.8882241
Phase-1 RCT-29	1.2194675	1.2416867	1.3243107	1.2343107	1.213291	1.295915	1.0716353	1.3415221	1.025924	0.9017847	0.7653904	0.94341	0.83226578	0.8882241
Phase-1 RCT-278	1.1561931	1.426752	1.2343107	1.2343107	1.213291	1.295915	1.0716353	1.3415221	1.025924	0.9017847	0.7653904	0.94341	0.83226578	0.8882241
Phase-1 RCT-42	0.9975127	0.9797118	1.0616513	1.0394283	1.0105377	1.0673221	1.1285199	1.1426868	0.845823	0.965391	1.045544	0.9302396	0.518065	0.8715502
Phase-1 RCT-25	1.1681032	1.1681032	0.9077231	1.1410824	1.0673221	1.1285199	1.1426868	0.845823	0.965391	1.045544	0.9302396	0.518065	0.8715502	0.8715502
Cytochrome P450 2C11	1.971347	1.245675	1.3073066	0.9065509	0.855657	1.2288054	1.3469031	0.8345864	0.8442429	1.1151834	1.163472	1.1803352	1.0448824	1.072262
Phase-1 RCT-202	0.8365338	0.92687035	0.9065509	0.855657	1.2288054	1.3469031	0.8345864	0.8442429	1.1151834	1.163472	1.1803352	1.0448824	1.072262	1.072262
Complement factor 1 (CFI)	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101	1.0654101
Proliferating cell nuclear antigen gene	1.9752729	1.0957611	0.99477466	0.9729175	1.2522231	1.0434051	1.0330311	1.0330311	1.0330311	1.0330311	1.0330311	1.0330311	1.0330311	1.0330311
Activating transcription factor 3	1.2706017	1.3001816	1.1531835	0.9209164	1.0293355	0.8902057	0.781562	0.6514555	0.9209164	1.0293355	0.8902057	0.781562	0.6514555	0.9209164
Focal adhesion kinase (p125-AK)	0.9100221	0.85174685	1.2030348	1.2030348	1.4319284	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076
Phase-1 RCT-289	0.7915212	0.95343344	0.91087947	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076	0.7580076
Phase-1 RCT-259	0.8855735	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924	0.89574924
Non-responsive element-binding protein	1.0185213	0.8791832	0.8049303	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078	0.7095078
MHC class I antigen RT1.A (I) alpha-chain	1.0510402	0.9529482	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675	0.9644675
And sulfatransferase	1.2398298	0.8370335	1.0018082	0.9934885	0.7485004	0.9934885	0.9934885	0.9934885	0.9934885	0.9934885	0.9934885	0.9934885	0.9934885	0.9934885
Phase-1 RCT-171	1.1681032	0.9642607	0.7568477	0.83308136	0.76641364	0.99142313	1.0553591	1.02301	0.9347756	0.8524038	0.8707794	0.9355028	1.00058	0.9053388
Phase-1 RCT-43	1.0455932	0.84756864	1.0198177	0.8916034	0.78812546	0.9151654	0.8075389	0.8075389	0.8075389	0.8075389	0.8075389	0.8075389	0.8075389	0.8075389
Phase-1 RCT-270	0.9481122	0.94779787	0.8651555	0.8602843	0.49297133	0.9225681	0.6227616	0.6781823	0.3426304	0.45168434	0.4163378	1.21691	1.071619	1.03532
Calmodulin-stimulating factor-1	0.8486254	1.0393006	1.0594105	0.9680305	1.144105	1.0258973	1.0429502	1.0323715	1.0450373	1.1917094	1.1750076	1.07549	1.071619	1.03532
N-cadherin	1.2768948	0.8651588	0.9444149	0.93262815	0.6716543	0.81968584	0.6063916	0.7812349	0.7095774	0.8033183	0.0436167	1.1313335	0.0436167	1.1313335
Phase-1 RCT-52	1.074153	0.976332	0.8112834	0.8318122	0.6977225	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215
Phase-1 RCT-22	0.9077092	0.9137417	0.86411875	0.93421066	0.9720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215	0.89720215
AT-3	0.8699445	0.9716994	0.90743405	0.9119425	0.842279	0.90743405	0.90743405	0.90743405	0.90743405	0.90743405	0.90743405	0.90743405	0.90743405	0.90743405
Phase-1 RCT-18	0.8655822	0.9715676	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564	0.9555564
Phase-1 RCT-123	0.867439	1.0511878	0.9089493	0.94555164	0.934152	1.0236252	1.0068107	1.099963	1.0565283	1.0515664	1.078836	1.006465	1.1400183	1.006465
Phase-1 RCT-66	1.029468	0.9844933	0.95931455	0.9846074	0.71932	1.0097575	1.1165049	1.0113394	0.34900307	1.1317323	1.078493	1.1770724	1.0427134	1.032387
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.9912697	0.80688757	0.8713806	0.8273035	0.546822	0.9514052	0.94920176	0.92310554	0.8739985	0.67126503	0.9898138	0.71837886	0.69457394	0.69457394
Glucose transporter 2	1.6352005	1.0638244	0.939674	1.148448	0.9116274	0.92859556	0.9887147	0.7391886	0.8704333	0.6500842	1.334428	0.87942874	0.87942874	0.87942874
Mitochondrial protein-2	2.0763328	0.7179652	0.7681613	0.769724	0.90076774	1	1.3352545	0.8912269	0.5902147	0.9118586	0.8575931	0.9846334	0.9708439	0.9708439
Mitochondrial protein-1	1.3268613	0.96435547	0.9234137	0.9537229	0.9632068	1.0059453	1.2900062	0.8555573	0.6506436	1.029144	1.0580783	0.9509723	0.9766105	0.9677057
Phosphatidylethanolamine-binding protein	0.9594088	1.0161313	1.052115	0.9367637	0.9890877	0.46145636	0.5946675	0.4566488	0.0817235	1.035718	1.2700055	0.9285984	1.0622194	1.0622194
Phase-1 RCT-180	0.8427234	0.8755273	0.9855741	0.9718597	1.0989118	1.078013	1.2495015	1.0538126	1.434312	1.1517388	1.338175	1.5037081	1.253411	1.398937
Integrin beta-4	1.2095273	1.0030444	0.9911601	1.294398	1.1155555	1.128097	1.069401	1.1193123	1.2305082	1.2305082	1.2305082	1.2305082	1.2305082	1.2305082
NADPH glycochrome P450 oxidoreductase	1.2797659	1.6128869	1.2491773	1.385452	1.1707333	0.8557883	0.57431984	0.29692943	0.62770605	1.5321187	0.8061578	0.6017578	0.6017578	0.6017578
Warf	0.84548694	0.94547	1.018657	1.094478	1.113455	1.0550512	0.83156774	0.194924	0.8454708	0.8454708	0.8454708	0.8454708	0.8454708	0.8454708
Endogenous retroviral sequence, 5' and 3' LTR	1.0707853	1.3162262	1.846026	1.0453918	0.96119255	0.9916824	0.3345087	0.8454708	0.8454708	0.8454708	0.8454708	0.8454708	0.8454708	0.8454708
Phase-1 RCT-53	0.99527264	1.0502623	1.2780972	1.2289869	1.0743561	0.9471435	0.92863276	0.98150307	1.3893063	0.8236084	0.8615698	1.0302026	0.9231687	0.9591789
Phase-1 RCT-54	0.9527059	1.072651	0.9384405	0.9630643	1.0434937	1.111221	1.044051	1.570478	0.8896945	0.6719491	1.0980718	0.983938	0.8432844	0.8432844
Phase-1 RCT-240	0.9971702	0.9629488	1.0657669	1.10394	0.96724183	0.98889894	0.864649	0.8942294	1.3803071	1.5071543	1.060762	1.107042	1.0706064	1.1471614
Osteopontin	1.1695331	1.0819327	1.051471	1.2371394	1.2415813	0.9842846	0.9842846	0.9842846	0.9842846	0.9842846	0.9842846	0.9842846	0.9842846	0.9842846
Phase-1 RCT-241	1.1338482	0.8215077	1.062178	0.8355605	1.2436943	1.1091138	0.946178	0.9850354	0.7242352	0.5593505	0.6427697	0.8852335	0.916566	0.8017716
Organic anion transporting polypeptide 1	1.192874	1.3314067	1.2364136	1.1305952	1.0259678	1.0454989	0.9263065	0.893421	5.854312	1.9898809	1.749256	0.8124526	1.1304405	1.180591
Tissue factor pathway inhibitor	1.2046522	1.2403407	1.5382786	1.6351259	1.674982	1.1112761	1.1991698	1.3838915	2.329353	1.900311	0.9431067	0.957478	1.213124	1.213124
Cyclin-dependent kinase 4 inhibitor P27kip1 (allelic)	1.1720524	1.1643957	1.5471147	1.9515782	1.5103108	1.000369	1.0501328	1.0153424	1.2764342	1.023398	0.9715417	0.9827037	0.876818	0.876818
Phase-1 RCT-288	0.837887	0.7786109	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983	0.8930983
Phase-1 RCT-39	1.3224815	0.8641382	1.242571	1.5055528	0.9175289	1.034773	0.9345773	0.9345773	2.574282	1.230187	1.230187	0.8652358	0.8652358	0.8652358
Phase-1 RCT-268	0.95599234	0.85933264	0.9712442	1.169062	1.0341872	1.0310075	1.2800347	1.1315424	0.9345773	0.9345773	0.9345773	0.9345773	0.9345773	0.9345773
Phase-1 RCT-113	1.012719	1.1923288	1.4439217	1.6182052	1.0539212	1.4767612	1.6182052	1.0539212	1.4767612	1.6182052	1.0539212	1.4767612	1.6182052	1.6182052
Adenine nucleotide translocator 1	0.9350759	1.08												

Organic cation transporter 3	0.933156	1.0621064	1.1231463	1.3231037	1.5328422	1.827633	1.3144175	1.3974421	1.8188026	1.7209445	1.5093228	1.0460919	1.286999	1.2236713
Hypoxia-inducible factor 1 alpha	1.5540093	1.0225453	1.147573	1.0095788	1.1074895	1.0765686	0.98088783	1	1.5452443	0.6908268	0.7189276	0.69835913	0.9408387	0.85875654
Phase-1 RCT-43	0.8891084	0.9924736	1.0599907	1.1113504	0.9916421	0.9843811	0.8003959	0.8623396	1.3839713	0.92381775	0.8802217	0.6594529	0.99945027	0.85868613
Phase-1 RCT-45	0.81700786	1.0206978	0.8219173	1.0684641	1.2605636	1.0278314	0.7681511	0.9172204	1.3284978	0.7888039	0.7790984	0.59416366	1.0088038	0.81153614
Matrix metalloproteinase, cytosolic	0.9338625	1.181727	1.3058571	0.81307155	1.2335563	0.9583595	1.1708597	1.107557	0.8352919	1.0433532	1.3237928	1.3057724	1.1475165	1.2614138
VLDL apolipoprotein	1.2242763	1.2147409	2.2318375	1.3275598	1.4806167	0.6315161	0.4247112	0.2863984	0.84619033	0.5851381	0.8322201	0.8815502	1.4104764	1.3384132
Phase-1 RCT-189	0.7805562	1.052448	0.9712821	0.8162744	0.88890434	0.40699465	0.683716	0.67521447	0.7303801	0.7444065	0.84836534	1.3605502	0.92549455	1.05254
Alpha-fetoprotein	1.0844842	0.9523705	0.968397	0.982236	1.0904053	1.0288725	0.9842022	0.9553019	1.0369917	1.0744078	0.9560884	1.0786543	0.962081	0.9397491
Calgranulin B	0.9728218	1.0284517	1.000776	0.84241036	0.7821339	0.4476208	0.9288713	0.8333473	0.9777202	1.1832201	1.0666332	1.2334346	1.1207012	1.1579784
Tissue plasminogen activator	0.7188602	0.85243533	0.802717	1.0023751	0.8524844	0.8789275	0.9288233	1.0168768	0.68531885	0.8081388	0.8708437	1.0144466	1.0354848	0.9818622
Phase-1 RCT-195	1.1075903	0.95440434	0.824573	0.9445621	1.0507843	0.818159	1.0157407	1.1852529	1.038801	0.7901492	0.97435236	1.0929234	0.90165937	0.961606
Liver fatty acid binding protein	0.51160771	0.77178615	1.1279451	0.8503591	1.1125832	0.8166157	1.0367306	1.1303734	0.946268	0.767027	0.65625995	0.7686596	0.9838331	1.128669
Alpha-1 microglobulin/kinin precursor (Amp)	0.8168741	1.0868597	1.1279451	1.004305	0.96585124	1.0451453	1.0028978	0.9917208	1.2447114	1.2073209	1.0916915	0.7105288	1.0038648	0.8867755
Phase-1 RCT-284	1.1759814	1.2549381	0.8269469	1.1318914	1.0592104	1.1149024	1.0134294	1.3528938	1.7700725	1.8533053	1.7700725	1.0916915	0.7105288	0.8867755
Phase-1 RCT-151	0.9468732	0.79892265	1.0268014	0.85114246	1.0317845	1.0179965	1.1491623	0.9876384	1.3006711	0.80571875	0.89021695	0.86971253	1.001497	0.975005
Phase-1 RCT-221	0.8851078	0.85913565	1.0652033	1.2028864	1.0389504	0.8833555	0.95800143	0.9749907	0.7216106	0.69156307	0.8420841	0.561485	0.95584077	0.6303137
Phase-1 RCT-225	1.1892351	1.1344316	1.201602	1.3227752	1.2214118	0.9577521	1.008761	1.1871523	0.78247804	1.3550472	1.3103944	1.0561423	0.94688346	1.1383064
Organic anion transporter 3	1.7519599	0.93863966	0.9588806	0.9235021	0.84227574	1.2088569	1.088761	1.1871523	0.78247804	1.3550472	1.3103944	1.0561423	0.94688346	1.1383064
Matrix metalloproteinase-1	0.7619056	0.90451527	0.9295906	0.8764577	0.892512	0.7188953	0.8267512	0.7188953	0.7409178	0.81143326	0.71592207	0.775698	0.9773659	1.0465431
Ureteric protein 2 precursor	0.753904	1.0566113	0.9287347	1.0035633	0.7409178	0.81143326	0.71592207	0.775698	1.2641414	1.3224704	0.9773659	0.9773659	0.9773659	1.0465431
Phase-1 RCT-212	1.1934193	0.79392266	0.9503456	0.9675845	0.9860859	1.0212438	1.0051414	1.1682861	0.8533462	0.8230196	0.76086735	1.0761214	1.1818571	0.9673636
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 19).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes-neer, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene as in Table 18 and as included in Table 26)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)													
Compound/Dose (2)	THEO 100	THEO 100	THEO 100	THEO 100	ANIT 60	ANIT 60	ANIT 60	ANIT 60	ANIT 60	ANIT 60	ANIT 60	ANIT 60	ANIT 60
Animal Number (3)	no	2531	2532	2533	yes-both	1651	1652	1653	yes-both	151	152	153	yes-both
Gene Name (5)	no	no	no	no	yes-both	1651	1652	1653	yes-both	151	152	153	yes-both
Insulin-like growth factor binding protein 1	1.8577065	1.0195587	0.81052405	0.8387315	0.78610766	1.2302067	1.1150937	1.222405	1.099547	1.201894	1.949942	1.915724	1.3218093
Gadd45	0.95312494	0.8533942	0.86776047	0.7812951	0.82943363	3.8833592	1.1696112	2.22405	1.099547	1.201894	1.949942	1.915724	1.3218093
G-myc	3.78970494	2.3545673	1.070751	1.531713	1.2711369	1.6993328	1.0013629	1.086646	1.1761646	1.2162606	1.6631449	1.5257095	0.9941691
NIPK	1.2178138	1.0404977	1.0893463	1.1544943	0.8684283	0.9513855	1.142004	0.9769987	1.481261	2.3261423	1.8327847	2.8327847	1.7091045
Cathepsin L sequence 2	1.6367413	1.8378412	1.9477276	1.9477276	0.88034075	0.7211687	1.1740044	0.9769987	1.481261	2.3261423	1.8327847	2.8327847	1.7091045
Heme oxygenase	3.2060776	5.717468	2.1466841	0.794832	0.8409988	1.2035406	0.9563836	1.048781	2.1105138	1.250377	10.658006	2.40887	2.5033394
Phase-1 RCT-109	1.1545151	1.1472744	0.97805595	1.052726	1.0412248	0.9200573	1.2342706	1.167453	1.2402111	1.2541653	1.275519	1.469945	1.3863876
Phase-1 RCT-111	1.9938915	1.0311375	0.81485045	0.86213347	0.82058704	0.9989347	0.9397775	1.0742478	1.6295944	1.6295944	1.6295944	1.6295944	1.6295944
Alpha-tubulin	1.13663	1.393211	1.1975	0.92072225	0.91453125	0.8247284	0.8247284	0.8247284	0.8247284	0.8247284	0.8247284	0.8247284	0.8247284
RNA polymerase beta	1.032415	1.0555971	0.8328757	0.5786254	1.033193	1.1203381	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854
Phase-1 RCT-103	1.4162142	1.843673	1.5786254	1.033193	1.1203381	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854	0.8601854
Ribosomal protein S9	1.3025768	1.16233	0.93182217	0.7292134	1.0273987	0.8081445	0.8081445	0.8081445	0.8081445	0.8081445	0.8081445	0.8081445	0.8081445
Phase-1 RCT-114	2.2042453	1.7152028	1.2592271	1.002485	0.9228243	0.7158921	1.482751	1.482751	1.482751	1.482751	1.482751	1.482751	1.482751
Phase-1 RCT-15	0.9516312	1.0026371	0.9322481	1.097508	1.2306837	0.9651803	1.510347	1.510347	1.510347	1.510347	1.510347	1.510347	1.510347
Macrophage inflammatory protein-2 alpha	4.0344834	1.3755621	0.8526026	0.93514025	0.9743493	0.885854	2.5088343	2.5088343	2.5088343	2.5088343	2.5088343	2.5088343	2.5088343
NGF-inducible anti-proliferative putative secreted protein (PC3)	1.0883357	0.86022013	0.7840951	1.5742143	1.7491634	1.3387784	1.0467099	1.0467099	1.0467099	1.0467099	1.0467099	1.0467099	1.0467099
Phase-1 RCT-191	1.5247805	1.5182159	1.4915265	0.90630245	0.8403319	0.8635248	1.0356357	1.0356357	1.0356357	1.0356357	1.0356357	1.0356357	1.0356357
Crin D3	1.4216951	1.2506069	1.5300031	0.8288254	0.88701653	0.8433955	0.987978	0.987978	0.987978	0.987978	0.987978	0.987978	0.987978
Phase-1 RCT-108	1.0740281	1.0007329	0.8557837	0.85402596	0.9696958	0.89457124	1.0181687	0.9467217	0.9727332	1.3904485	1.1481444	1.652432	1.3116787
Phase-1 RCT-59	1.5900214	1.4347157	0.99100304	0.8222793	1.0388464	0.8231025	1.2598821	1.0395311	0.7690021	1.0001321	0.9691883	1.0019475	1.0948193
Phase-1 RCT-192	1.0365897	1.588808	1.2053989	1.1351922	0.9157337	1.0267438	1.2598821	1.0395311	0.7690021	1.0001321	0.9691883	1.0019475	1.0948193
Phase-1 RCT-75	1.2522654	1.2256071	1.4222338	1.6139636	1.3571438	1.1680391	1.0655171	1.1846697	0.9762527	1.9877325	1.1161382	1.2327073	1.2377907
Acetyl-CoA carboxylase	1.2608328	1.5450202	0.9356046	0.8556434	0.8562146	0.8557615	0.8557615	0.8557615	0.8557615	0.8557615	0.8557615	0.8557615	0.8557615
Phase-1 RCT-49	1.1531329	1.261498	1.5499185	1.2271726	0.7830147	0.8566328	1.0751907	1.0751907	1.0751907	1.0751907	1.0751907	1.0751907	1.0751907
Phase-1 RCT-9	2.73913896	0.86510514	2.0027694	2.0027694	1.3043343	1.12733	0.8677546	0.8677546	0.8677546	0.8677546	0.8677546	0.8677546	0.8677546
Phase-1 RCT-156	2.3452342	2.2720705	1.2852205	0.62833674	0.8540567	0.9897334	2.0279894	2.0279894	2.0279894	2.0279894	2.0279894	2.0279894	2.0279894
Collin	1.3378954	1.3700176	1.9604118	0.9963358	0.9875792	1.0576735	1.0576735	1.0576735	1.0576735	1.0576735	1.0576735	1.0576735	1.0576735
Phase-1 RCT-127	2.0728037	2.874643	1.6278389	1.0834774	1.1459012	1.2878778	1.2878778	1.2878778	1.2878778	1.2878778	1.2878778	1.2878778	1.2878778
Macrophage inflammatory protein-1 alpha	1.6353768	1.1271833	0.955105	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342	1.4394342
Zinc finger protein	2.7797558	2.394884	1.3565024	1.3538867	0.86863516	1.0269728	1.0269728	1.0269728	1.0269728	1.0269728	1.0269728	1.0269728	1.0269728
Phase-1 RCT-73	0.581481	0.7147318	0.8293315	0.80072814	0.9510467	0.85911495	0.85911495	0.85911495	0.85911495	0.85911495	0.85911495	0.85911495	0.85911495
Glutamine synthetase	0.8617989	0.7057208	1.2005938	0.8346486	0.8188794	1.0502946	0.8031535	0.9076856	1.0161415	1.7470182	0.7295394	0.9409187	0.9409187
Carb-binding protein	0.8265464	1.2686068	1.0474222	0.5506874	0.61510855	0.6679841	0.6679841	0.6679841	0.6679841	0.6679841	0.6679841	0.6679841	0.6679841
Phase-1 RCT-242	9.1628475	2.615471	1.2044868	1.2816093	1.0942544	1.1528665	2.374917	2.374917	2.374917	2.374917	2.374917	2.374917	2.374917
Phase-1 RCT-50	3.4958575	1.7231	0.9665522	2.588153	1.1561269	0.8428534	0.8428534	0.8428534	0.8428534	0.8428534	0.8428534	0.8428534	0.8428534
Elongation factor-1 alpha	0.8504942	1.922263	0.93923473	0.8343079	0.8516285	0.8516285	0.8516285	0.8516285	0.8516285	0.8516285	0.8516285	0.8516285	0.8516285
Integrin beta1	7.585116	1.7902743	1.2685578	0.9086036	0.98908454	0.8613259	1.2801478	1.2801478	1.2801478	1.2801478	1.2801478	1.2801478	1.2801478
Insulin-like growth factor binding protein 5	1.3969532	1.164054	1.3852359	1.0277894	1.1277946	1.0176704	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398
Phase-1 RCT-59	2.2298082	2.3834777	2.4886112	1.0277894	1.1277946	1.0176704	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398	0.8913398
Phase-1 RCT-76	0.8225686	0.8838699	0.84818417	0.6523632	0.670822	0.7071592	0.6641248	0.6641248	0.6641248	0.6641248	0.6641248	0.6641248	0.6641248
Familin H-chain	0.70442873	0.7979279	0.6795181	0.5755586	0.5602339	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753
Selenoprotein P	0.34870835	0.5076284	0.6795181	0.5755586	0.5602339	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753
PTEN/MAMC1	0.9414647	1.0591648	1.1809256	0.9427853	0.88558835	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753	0.8843753
Phase-1 RCT-214	0.3424636	0.42878658	0.48252755	0.953472	1.0031888	0.9564763	0.5124358	0.5124358	0.5124358	0.5124358	0.5124358	0.5124358	0.5124358
Phase-1 RCT-112	1.0097594	1.0405075	1.1837282	0.9893536	1.1699443	1.1699443	1.1699443	1.1699443	1.1699443	1.1699443	1.1699443	1.1699443	1.1699443
Thymidine synthase	1.0648315	1.011486	1.0660153	1.0404687	0.953401	0.9762096	0.9614453	0.9614453	0.9614453	0.9614453	0.9614453	0.9614453	0.9614453
Phase-1 RCT-13	0.4244282	0.49410803	0.3221814	0.8140652	0.7333463	0.7333463	0.7333463	0.7333463	0.7333463	0.7333463	0.7333463	0.7333463	0.7333463
Nucleosome assembly protein	1.50052924	0.53660136	0.6443425	0.5889454	0.7303363	0.6971077	1.262601	1.262601	1.262601	1.262601	1.262601	1.262601	1.262601
Cholesterol 7 alpha-hydroxylase (P450 VII)	0.1033655	0.1414043	0.9829329	0.8918946	0.8116998	0.8116998	0.8116998	0.8116998	0.8116998	0.8116998	0.8116998	0.8116998	0.8116998
Vesicular monoamine transporter (VMAT)	1.6076196	1.4573365	1.4943392	0.9843988	0.964712	0.964712	0.964712	0.964712	0.964712	0.964712	0.964712	0.964712	0.964712
Phase-1 RCT-260	0.7554411	0.8787394	0.9564382	1.0554939	1.0046878	0.9559567	0.8950026	0.8577496	0.8577496	0.8577496	0.8577496	0.8577496	0.8577496

Table 28

Phase-1 RCT-32	1.2663635	1.0439066	1.3560437	1.1515689	0.84317287	0.733747	0.9176187	1.0795142	1.0339108	0.92145359	0.8706819	0.91176593	0.86354568	0.91648394
Peroxinome assembly factor 1	1.7359122	1.2750748	1.2556961	1.0622368	1.0839769	1.0876762	0.7213964	1.0524332	0.839697	0.93070715	0.8245078	0.93174497	0.8447839	0.91176593
6-oxoquinoline DNA glycosylase	1.0715525	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706	1.0506706
Phase-1 RCT-42	0.8659267	0.83301284	0.8459989	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973	0.8159973
Malin F/G	0.26512594	0.27296227	0.3876114	0.94351315	0.7855864	0.8875334	0.36594617	0.94351315	0.7855864	0.8875334	0.36594617	0.94351315	0.7855864	0.8875334
Phase-1 RCT-184	0.9627747	1.0673533	0.8650034	1.0333664	0.91407183	1.0279717	1.1024449	1.0012934	0.8007013	0.8189149	0.8622423	0.1175436	0.8327423	0.76481678
Phase-1 RCT-119	0.4777423	0.4110178	0.46834728	0.9539791	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197
Phase-1 RCT-118	1.1050906	1.2604584	1.7688016	0.9539791	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197
Carnitine acetyltransferase II	0.5979704	0.656626	0.8768755	0.9363961	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578	0.8689578
Hydroxymethylglutaryl-CoA lyase	1.652722	1.339217	1.600484	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197
Phase-1 RCT-71	2.4692686	2.702407	0.9405384	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197
Phase-1 RCT-161	1.033079	0.9405384	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197	0.9719197
Phase-1 RCT-207	2.0221515	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358	2.1250358
Phase-1 RCT-225	2.0354884	1.6942136	0.9528573	1.153274	1.093058	1.174386	0.743118	1.393274	1.093058	1.174386	0.743118	1.393274	1.093058	1.174386
Phase-1 RCT-44	0.6134111	0.7337926	0.9528573	1.153274	1.093058	1.174386	0.743118	1.393274	1.093058	1.174386	0.743118	1.393274	1.093058	1.174386
Cyclodextrin P450 2E1	1.62815	1.134452	1.0951645	1.464322	1.263278	1.469147	1.343004	1.349997	1.374177	0.934574	0.854278	1.18215	1.8526723	1.17787
Thiodioxin-1 (Tdx1)	1.0434809	1.2330536	0.9640825	0.841342	0.80071276	0.93411807	0.93411807	0.93411807	0.93411807	0.93411807	0.93411807	0.93411807	0.93411807	0.93411807
Carnitine acetyltransferase II	0.9525746	0.20386759	0.1489183	0.7632176	0.9679762	1.112431	1.0988894	0.9711557	0.7632176	0.9679762	1.112431	1.0988894	0.9711557	0.7632176
Cyclodextrin component C3	1.365305	1.073746	1.08894	1.2223126	1.1630431	1.0988894	0.9711557	0.7632176	0.9679762	1.112431	1.0988894	0.9711557	0.7632176	0.9679762
Glucosylase	0.2271803	0.2231807	0.324073	0.8831044	0.37406287	0.6822068	0.7369481	0.7369481	0.7369481	0.7369481	0.7369481	0.7369481	0.7369481	0.7369481
Phase-1 RCT-173	0.5559304	0.5609324	0.733949	1.494249	1.116548	1.5702301	0.863481	0.863481	0.863481	0.863481	0.863481	0.863481	0.863481	0.863481
3-methylcrotonyl-CoA carboxylase	1.3759367	1.2215669	0.8796246	0.6339004	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164	0.98447164
Periodic acid-Schiff reaction enzyme type II	0.4853818	0.6585728	0.5930555	0.71843165	0.71157825	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074
Phase-1 RCT-40	0.2572694	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354	0.3005354
Sensitization marker protein-30	2.2264504	1.9044409	1.4531388	1.1531388	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167	1.0988167
Cytin G	0.4853818	0.6585728	0.5930555	0.71843165	0.71157825	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074
Phase-1 RCT-28	0.6103157	0.72795018	0.86061025	0.50367177	0.46769432	0.6174423	0.6174423	0.6174423	0.6174423	0.6174423	0.6174423	0.6174423	0.6174423	0.6174423
Alcohol dehydrogenase 1	0.3938147	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228	0.5184228
Stem cell factor	0.4853818	0.6585728	0.5930555	0.71843165	0.71157825	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074	0.7588074
Protein tyrosine phosphatase alpha	1.0898191	1.0925837	1.1685536	1.2540662	0.7591247	0.5986864	0.5986864	0.5986864	0.5986864	0.5986864	0.5986864	0.5986864	0.5986864	0.5986864
Phase-1 RCT-55	1.4229134	1.756481	1.4431288	1.0594631	1.1553823	0.977963	0.977963	0.977963	0.977963	0.977963	0.977963	0.977963	0.977963	0.977963
DNA topoisomerase I	1.1016866	1.3054838	1.1424066	0.8493008	0.8513714	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933
Phase-1 RCT-290	0.8991229	1.5094856	0.7853064	0.84311744	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933	0.9929933
Superoxide dismutase Mn	0.522318	0.430687	0.8011008	1.133955	1.4442486	1.036551	1.202307	1.6334853	1.2386514	1.1412523	1.3404566	1.4790536	0.988248	1.062444
Cardiomyocyte phosphatase I	0.8522339	0.8170693	0.8011008	1.133955	1.4442486	1.036551	1.202307	1.6334853	1.2386514	1.1412523	1.3404566	1.4790536	0.988248	1.062444
Phase-1 RCT-141	1.2424747	1.2633663	1.8288006	0.9278763	0.7007986	0.93417054	1.0623133	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236
Gamma-actin, cytoplasmic	0.94803074	0.9787824	1.0383899	1.401289	1.0394475	0.93417054	1.0623133	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236	0.96619236
Phase-1 RCT-141	1.1387465	1.2120247	0.7343562	0.8617973	0.90285646	0.6212063	0.8531406	1.100342	1.0234295	1.0234295	1.0234295	1.0234295	1.0234295	1.0234295
Phase-1 RCT-141	1.4898988	1.131468	0.949575	1.2637444	1.3683584	1.1688179	1.0184702	1.252446	1.0234295	1.0234295	1.0234295	1.0234295	1.0234295	1.0234295
Phase-1 RCT-141	1.5202338	1.9880958	1.7904348	0.949575	1.2637444	1.3683584	1.1688179	1.0184702	1.252446	1.0234295	1.0234295	1.0234295	1.0234295	1.0234295
Phase-1 RCT-141	1.1840187	1.2628538	1.0602427	0.9611742	0.98364013	0.8927244	0.8927244	0.8927244	0.8927244	0.8927244	0.8927244	0.8927244	0.8927244	0.8927244
Phase-1 RCT-65	0.4320325	0.41457424	0.36011414	1.1647894	1.3021673	1.1629522	1.2268347	1.2268347	1.2268347	1.2268347	1.2268347	1.2268347	1.2268347	1.2268347
Glut	2.8571018	1.269916	1.0601388	1.9909544	1.7620668	1.5162893	2.084037	1.2743791	1.1342099	1.1342099	1.1342099	1.1342099	1.1342099	1.1342099
Protein O-mannosyltransferase I (Pom1)	0.562338	0.289916	1.0601388	1.9909544	1.7620668	1.5162893	2.084037	1.2743791	1.1342099	1.1342099	1.1342099	1.1342099	1.1342099	1.1342099
HMG CoA reductase	0.9396785	0.7656073	0.870678	1.420469	1.3922846	1.5294532	1.763364	1.0554783	0.85110145	0.85110145	0.85110145	0.85110145	0.85110145	0.85110145
Phase-1 RCT-12	1.001016	0.8427231	0.8125725	1.0764321	1.1992446	1.0368933	1.422851	1.059444	1.1237003	0.99063987	1.0146551	1.0405171	0.9353542	1.0033823
Interferon related developmental regulator (IFRD1)	1.287171	1.5135175	1.7927483	0.7127633	0.8135634	0.72211615	0.801223	0.84179425	1.0093804	1.5784473	0.8766637	0.5521281	1.1416252	1.0262102
Glucose-regulated protein 78	1.3154746	1.9759763	1.0250951	0.78633164	0.9622665	0.750036	0.4939182	0.9451277	0.4277025	0.47194386	0.4985586	0.6348192	0.5993687	0.6348192
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.62026036	0.68414859	0.790359	0.8552435	0.78515814	0.8785804	0.8785804	0.8785804	0.8785804	0.8785804	0.8785804	0.8785804	0.8785804	0.8785804
Caspase 6	1.0633247	0.75148524	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228	0.76195228
Phase-1 RCT-169	0.45469708	0.59004873	0.56473994	0.7133278	0.9882086	1.009198	1.181015	1.181015	1.181015	1.181015	1.181015	1.181015	1.181015	1.181015
Phase-1 RCT-197	0.7564947	0.8586181	1.1862805	0.7788477	0.9860972	0.8634561	2.0215063	1.587087	1.8994957	0.8794455	0.9584074	0.85942566	0.781685	0.9374483
Phase-1 RCT-34	0.31587252	0.3984442	0.3596196	1.2312793	1.2677217	1.1341612	0.7063809	1.1385628	0.8622281	0.63878005	1.3661293	1.3130203	1.0276834	1.0787803

Table 28

Phase-1 RCT-22	1.1308155	1.636096	1.092936	1.025592	1.0620791	0.396435	1.004898	1.154986	0.66542494	0.7733882	0.75046553	0.703192251	0.7082347
Phase-1 RCT-23	1.425564	1.419108	1.487262	0.862974	0.7706459	1.1484771	1.1204019	1.2736372	0.125553	0.36018976	0.75046553	0.703192251	0.7082347
Phase-1 RCT-24	0.5810402	0.3356783	0.5030925	0.662974	0.7706459	1.1484771	1.1204019	1.2736372	0.125553	0.36018976	0.75046553	0.703192251	0.7082347
Phase-1 RCT-25	0.68106014	0.5769848	0.6303037	1.2081564	0.7642826	1.0444826	1.0615205	1.2160925	0.59654065	0.74300864	0.7103221	0.6598119	0.7883303
Cytochrome P450 2C39 (alternate clone 2)	0.8784784	0.67720028	1.1492949	0.73285925	0.8226545	0.5679864	0.8313363	1.0290779	1.76394485	1.7634287	1.76394485	1.551326	0.703117
Phase-1 RCT-26	1.8639467	2.246058	1.316602	0.94251854	1.8811027	1.21064	1.082788	1.4075311	1.20580234	0.94433038	0.9886616	1.8058173	1.8445351
Phase-1 RCT-27	0.8932555	1.0410146	0.9632644	1.030474	1.187026	1.0511178	1.078569	1.197858	1.245558	1.0436075	1.1647286	0.9651847	0.8846173
Methyl-CoA racemase alpha	0.7707694	1.482733	0.830881	0.8632487	0.8563414	0.99489076	0.8373775	0.9617746	0.97639745	1.8579628	0.9268464	1.1574188	0.9338743
Cytochrome P450 1A2	0.5970493	0.84197855	0.9691238	1.524335	0.436156	0.4630703	0.73879296	0.9957336	1.3275454	0.8627372	0.82148735	0.7598773	1.010833
Phase-1 RCT-28	1.8655514	1.2400919	0.8753289	0.628204	1.056406	0.75474393	0.566206	0.7014826	0.8612338	0.7272809	0.65951194	0.68259454	0.7601083
Monamine oxidase B	0.40415886	0.47420132	0.8753289	0.628204	1.056406	0.75474393	0.566206	0.7014826	0.8612338	0.7272809	0.65951194	0.68259454	0.7601083
Phase-1 RCT-29	0.5477037	0.86347666	0.84021647	0.9607835	0.8615436	0.8606122	0.89174118	0.9143856	0.8894882	1.2655608	1.1850081	1.2648133	1.0520187
Phase-1 RCT-30	0.9407031	0.9336552	0.9200354	0.8365909	0.8615436	0.8606122	0.89174118	0.9143856	0.8894882	1.2655608	1.1850081	1.2648133	1.0520187
Phase-1 RCT-31	1.2507234	0.99473165	1.0246515	1.3187885	1.1610865	1.1631003	0.75258523	0.9731089	0.9384682	0.94385105	0.6727889	1.5080981	1.4328836
Phase-1 RCT-32	0.414977	0.5429761	0.85408904	1.007997	1.425031	1.2423332	1.0017287	0.9706467	0.9636751	0.9240778	1.0241457	1.158922	0.9140217
Phase-1 RCT-33	0.5854065	0.7975663	0.83572155	0.8788197	0.8460375	0.968942	0.94157934	1.1669077	0.9166469	0.6898638	0.7825019	0.9343068	0.9762405
Glutathione S-transferase theta-1	0.69382636	0.73775387	0.828826	1.0261432	0.9362444	0.87485373	0.8188382	1.1669077	0.9166469	0.6898638	0.7825019	0.9343068	0.9762405
Phase-1 RCT-34	0.4372834	0.4875767	0.1771383	0.93764205	0.93572116	1.1860427	0.93704736	0.940576	0.87955864	1.415568	1.2873513	1.3504876	1.4705305
Phase-1 RCT-35	0.70470925	1.0382148	0.89791024	0.880204	0.9240868	1.0647773	0.86356519	0.8670596	0.79595964	0.9054281	0.7913587	0.8612908	0.7760974
Actin receptor type II	1.2520887	1.0382148	0.89791024	0.880204	0.9240868	1.0647773	0.86356519	0.8670596	0.79595964	0.9054281	0.7913587	0.8612908	0.7760974
Glycine methyltransferase	0.44981107	0.5588891	0.7545111	0.8148013	0.70459763	1.2334566	0.6204041	0.8731793	0.8541164	0.8509635	1.4909077	1.2505986	1.1312002
Phase-1 RCT-36	0.7543388	0.70520385	0.8585907	0.85811235	0.92323233	0.72506005	1.0213203	0.8234904	0.9561284	1.2116524	1.0639513	1.0480566	1.3227127
Phase-1 RCT-37	1.1508285	1.087129	1.1883276	0.9897536	0.9898767	0.960111	0.8747408	0.9743904	0.8515599	0.7884276	0.7453061	0.72311426	0.8142707
Gap junction membrane channel protein beta 1 (Gp1)	0.4988807	0.29584505	0.32212287	1.273461	1.2031487	1.0601085	1.4752136	1.0867467	1.2513859	0.6102872	1.9384908	1.5492929	1.9160479
Phase-1 RCT-38	1.1945838	1.0775385	1.0442026	1.2258453	1.0715451	1.0333442	0.8891181	1.0496185	1.0725808	0.7575878	0.78364134	0.7744145	0.7520881
Phase-1 RCT-39	0.721317	0.7420958	0.87714535	0.7684604	0.9350991	0.8276341	1.0714083	0.9080732	0.8272645	1.6417882	1.2579132	1.1891845	1.2757661
Relaxin-binding protein (RBP)	0.46426568	0.563044	0.800343	0.6245376	0.8848462	0.858166	0.8627829	0.8924298	0.8592623	1.9017811	1.8589321	1.8881588	1.7948575
Very long-chain acyl-CoA synthetase	0.81044558	0.7456922	0.91457097	0.6064915	0.83130293	0.73725394	0.8837968	0.9016867	0.9237819	1.3071889	1.5579302	1.5723515	1.164676
Synthetase	1.0256684	0.9220158	0.5468844	1.1035878	0.970146	0.94074523	0.8551083	1.0948883	0.8696347	0.93028947	0.62178147	0.8230666	0.9343068
Phase-1 RCT-40	0.8970434	0.86653147	0.9818503	1.0219948	0.9957715	0.93840975	1.0432082	1.021578	0.9943041	0.8094298	0.68907126	1.2351346	0.7142638
Phase-1 RCT-41	1.252637	2.1723237	1.6937224	1.0627486	1.1279486	0.9253208	0.8206206	0.9302863	0.9287868	0.95877334	0.87403025	0.89023024	0.9127183
Actin	0.7887234	0.8115975	0.8611034	1.0368736	1.0151545	1.1227687	0.80878113	0.8166823	0.80978113	1.2221065	1.1873945	1.631802	1.1315519
Phase-1 RCT-42	0.5453231	0.53864814	0.6521261	0.8234304	0.90659265	0.87347134	0.8048181	0.80810104	0.7092686	0.9142339	0.73965594	0.6591609	0.7513346
Sarcoplasmic reticulum calcium ATPase	1.1523994	1.4426387	1.2798468	0.8404832	0.8689137	1.0587713	0.96427506	0.9737416	0.97348894	3.9010272	1.3892564	1.4140908	1.8570169
Alpha-2-macroglobulin, sequence 2	0.8502711	0.0403843	0.90638437	0.9371555	0.91574204	1.0076454	1.3204478	1.1285903	1.3324735	0.96200585	0.82928475	0.91477897	0.81289354
Phase-1 RCT-204	1.0719493	0.8317385	0.8090633	1.3544805	1.2860097	1.074715	1.0599156	0.9561297	0.88426306	1.2268988	1.3679987	1.0557984	1.2283928
Vascular endothelial growth factor	0.22653377	0.2204927	0.42205864	0.86241254	1.0712388	0.9659268	0.89498764	0.8943973	0.8146045	0.5124672	0.83164045	1.5300987	1.1711408
NAADP-dependent isocitrate dehydrogenase, cytosolic	0.80597365	0.9842419	1.1440216	1.129503	1.0622554	1.0435909	1.049131	1.3372943	1.0821303	0.946541	1.576299	1.824378	1.0155328
DNA binding protein inhibitor ID2	0.36311833	0.2454854	0.3123126	0.70709	1.391035	1.2602386	0.7813085	0.8000083	0.8224397	0.9521015	1.8263354	1.2247102	1.1820047
Glutathione S-transferase Ya	1.3877528	0.8976402	0.8673453	0.5945983	0.7164839	1.4394163	1.3289781	1.0547566	1.0711443	0.6488224	1.154437	0.8970572	0.837823
Epoxide hydrolase	0.7593347	0.214834	0.7774988	0.7057493	1.0052128	0.5779599	1.0054009	0.77339425	0.8055467	1.6836514	1.2143323	1.280773	1.0894256
Insulin-like growth factor I	2.246754	2.0235326	1.937881	1.038198	1.2483485	0.8245806	0.94376914	0.9866937	0.88534294	1.1263537	1.452151	1.2815894	1.201602
Proteinase 1	0.4837547	0.5928881	0.64294773	0.9898352	1.0404673	1.067835	0.88955286	0.95070537	0.9565354	1.1705163	1.321275	1.4024783	1.403668
Phase-1 RCT-136	0.5018089	0.842127	0.7700804	0.8387424	0.8387424	0.94639325	0.83137919	0.90570737	0.95623916	1.0847173	1.0329431	1.1291384	1.1120788
Phase-1 RCT-137	0.67271286	0.72875625	0.707145	0.93159864	0.8387424	0.94639325	0.83137919	0.90570737	0.95623916	1.0847173	1.0329431	1.1291384	1.1120788
Phase-1 RCT-138	0.7047539	0.76535204	0.71763843	1.0121884	0.9373354	1.0079603	0.9958245	0.9900926	0.8659434	1.1213183	0.880945	1.040388	1.0581537
Phase-1 RCT-139	0.9278865	0.7889205	0.808474	0.9165927	1.0523678	1.07314	0.9742865	0.96907514	1.0716965	0.891458	0.82491314	0.8015348	0.83645993
Phase-1 RCT-140	0.79957874	0.7934388	0.83210176	0.73827654	0.8837712	0.9154436	0.9889477	1.0055834	1.0041462	1.155885	1.2123757	1.7591436	1.7777395
Acyl-CoA dehydrogenase, medium chain	0.3045239	0.40643677	0.5249075	0.8591985	1.1525855	1.1276923	0.8835205	0.8862843	1.001292	0.80658814	0.9703533	0.94701123	0.78218596
Glutathione S-transferase Y02 subunit	0.92416507	1.0486173	1.1988419	1.304089	1.234084	1.1378949	1.0743927	1.005292	1.0830272	0.80658814	0.9703533	0.94701123	0.78218596
Carboxyl reductase	0.70098703	0.7887908	0.9577942	0.7178823	0.9133807	0.9133807	1.0133943	1.036886	1.0080778	0.80658814	0.9703533	0.94701123	0.78218596
Phase-1 RCT-166	0.8851826	0.8662528	0.9382716	1.3582342	1.4303906	1.1658422	0.9285585	1.0375022	1.050973	0.9721485	1.664367	1.0208557	1.2654927
Apolipoprotein E	0.41832514	0.36146396	0.789181	0.860472	0.8021087	0.792164	0.792164	0.792164	0.792164	0.792164	0.792164	0.792164	0.792164
Phase-1 RCT-167	0.74891387	0.9076376	0.778952	1.1876825	1.1876825	1.23038	0.877488	0.877488	0.877488	0.877488	0.877488	0.877488	0.877488
UDP-glucuronosyltransferase	0.6290925	1.1224369	0.63963157	0.81012243	0.91005915	0.718954	0.86335744	0.9612055	0.93593457	0.8465112	1.1470145	0.8313082	1.1038878
Glutathione S-transferase P1	0.6290925	1.1224369	0.63963157	0.81012243	0.91005915	0.718954	0.86335744	0.9612055	0.93593457	0.8465112	1.1470145	0.8313082	1.1038878
Disulfide isomerase related protein (ERp72)	0.5588473	0.7036254	0.93710083	0.84066705	1.0014877	1.0128235	0.86335744	0.9612055	0.93593457	0.8465112	1.1470145	0.8313082	1.1038878
Ribosomal protein L13	1.7592546	1.8117203	1.3923713	0.52711457	0.5835136	0.6233739	0.86146617	0.8653144	1.0863144	1.0863144	1.0863144	1.0863144	1.0863144
Candicidin	2.281062	2.3966518	1.4282823	0.8809545	0.81076814	0.82861763	1.0505555	1.1348828	1.3342403	2.5089014	0.9898571	1.1598058	0.7457641
Inter-alpha-inhibitor H4 heavy chain (IbH4)													

Phase-1 RCT-3	1.0184433	1.0518341	1.0654555	1.1186602	1.0436262	1.0387962	1.0273917	1.0200948	1.0724574	0.65926104	0.6887421	0.6819239	0.70804083	0.8018848
Feen beta (r-eb)	0.8327773	1.2724260	1.388874	1.0120357	0.9593313	1.0973529	1.1813033	0.9472866	0.8575428	1.459849	1.3263263	1.873284	1.2724094	1.1395562
3-hydroxyisovalerate dehydrogenase	0.5389554	0.8191268	0.7526178	0.7024103	0.8017496	0.8523453	0.8482165	0.819072	1.615261	1.3164902	1.2244747	1.07482	1.1391059	1.079695
Carbonic anhydrase III, sequence 2	0.5080026	0.55815216	0.7073512	0.81937474	0.7520093	0.8313954	0.9218506	0.819072	0.7096105	1.8400398	1.8613223	2.458617	1.6302828	1.0759655
Phase-1 RCT-10	0.48418176	0.6126006	0.62376313	0.64067368	0.64523525	0.8471121	1.0014356	0.7971673	1.2522269	1.4271813	1.0317128	1.309003	1.3879051	1.1333584
Alpha-2-microglobulin	0.29952586	0.8211163	0.801648	0.49235755	0.9217358	0.8471121	1.0014356	0.7971673	1.2522269	1.4271813	1.0317128	1.309003	1.3879051	1.1333584
Dynamin-1 (D100)	0.98570857	0.72075087	0.8527931	0.8452111	0.9805695	0.9623996	0.8638512	1.0140206	0.8148944	1.9408866	0.8584985	0.6589975	0.85098354	0.89183783
Uryl oxidase	0.98570857	0.72075087	0.8527931	0.8452111	0.9805695	0.9623996	0.8638512	1.0140206	0.8148944	1.9408866	0.8584985	0.6589975	0.85098354	0.89183783
Phase-1 RCT-252	0.8285519	1.1651257	1.2603562	1.0986326	0.7373394	1.3071404	0.9214884	0.8173841	1.06505	0.82815874	1.4900778	1.6207409	2.2446158	1.2400363
Phase-1 RCT-278	1.468473	1.4764953	1.6038652	1.0986326	0.7373394	1.3071404	0.9214884	0.8173841	1.06505	0.82815874	1.4900778	1.6207409	2.2446158	1.2400363
Phase-1 RCT-28	1.336847	1.6038652	0.8910111	0.7801686	1.0438167	0.8610142	1.1776522	1.0745447	1.0374261	1.0088334	1.1821977	0.916688	1.0288259	1.0524036
Phase-1 RCT-265	1.2641838	1.2642598	1.10331	0.9073904	0.9533004	1.0414634	1.0447799	1.0004472	1.0107633	1.1839978	0.9411088	1.2010261	0.9532478	1.1856569
Cytochrome P450 2C11	2.4704466	1.9078546	1.4589169	1.0077625	0.84485775	1.0711663	0.8503735	0.5943745	0.6158655	0.6299078	0.73781073	1.8470918	1.1856569	1.1856569
Phase-1 RCT-202	0.5051588	0.7278986	1.1768051	0.7149809	0.865961	0.8505735	0.9433334	0.9146333	0.8531529	1.5513196	1.3353562	1.4039745	1.337552	1.0420713
Complement factor I (CFI)	1.4294137	1.4133397	1.150556	0.6994027	0.7110971	0.7682333	0.9433334	0.9146333	0.8531529	1.5513196	1.3353562	1.4039745	1.337552	1.0420713
Proliferating cell nuclear antigen gene	1.0077639	0.81865348	0.8512733	1.5028681	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398	1.4855398
Activating transcription factor 3	1.3414068	1.2758701	1.1721158	1.0877426	1.0256263	0.86721035	0.7408378	0.8526235	0.7393453	0.8526235	0.7393453	0.8526235	0.7393453	0.8526235
Focal adhesion kinase (p125FAK)	0.528327	0.5905926	0.7509657	0.9482454	1.116709	1.169125	1.7530354	0.8116119	0.7709159	1.012759	1.0945505	1.192117	1.1585194	1.0736589
Phase-1 RCT-289	1.1215028	1.090598	1.2498517	0.9871378	0.9138825	1.0122176	1.4704822	1.2030901	1.2330901	1.095908	0.7442782	0.7357682	0.8130061	0.83569133
Phase-1 RCT-259	0.6973928	0.58315735	0.8605114	0.85443786	1.0485052	1.033861	0.935323	0.93701285	0.8326396	1.2842793	1.8240598	1.5485758	1.4097923	1.6682738
Iron-responsive element-binding protein	1.504269	0.88223	0.8514684	1.8590981	1.0042565	1.449823	1.3440706	1.1681986	1.389407	0.0885353	1.4078712	1.185018	1.054262	1.3001215
AT-3	0.6038077	0.5276628	1.2099162	0.742377	0.5412163	1.0138146	0.6221136	0.5365393	2.3734446	1.2864771	1.1089584	1.3323681	1.2285667	1.2285667
Phase-1 RCT-171	0.7378557	0.726193	0.7775704	0.8533958	0.89241906	0.96378416	0.92321028	0.93005747	0.9799332	0.771871	1.0407368	0.8714356	0.870087	0.870087
Phase-1 RCT-63	0.63307003	0.8211305	0.71828216	0.7868216	0.84522705	0.6916546	0.863882	0.6935655	0.8294996	0.6407857	0.7512507	0.8629757	0.6592625	0.8329174
Phase-1 RCT-270	0.25883542	0.29773548	0.42871425	0.3381478	0.81166586	1.045953	0.580312	0.866144	0.6865335	0.89342913	1.1652378	1.1633575	1.0940489	1.1633575
Colony-stimulating factor-1	1.0404012	1.2094995	1.0257403	0.8030518	0.8934542	0.8169802	1.1092607	1.0585774	1.0107762	0.7781168	1.7748459	1.6199031	1.3877275	1.1784985
N-cadherin	0.8018595	0.6984397	0.82318836	1.0139584	0.9746881	0.9640716	0.7199556	0.8758886	0.8120479	0.8711188	0.9435722	1.0228248	0.9813706	0.8894089
Phase-1 RCT-62	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
Phase-1 RCT-22	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
AT-3	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
Phase-1 RCT-18	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
Phase-1 RCT-123	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
Phase-1 RCT-65	0.9436966	1.0162155	0.6039054	0.7604068	0.92033335	0.933455	0.8120184	0.8085017	0.82604456	1.0475864	0.79279537	0.8698405	1.0074229	1.0318091
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	0.3808276	0.5262183	0.52223164	0.7942725	0.8408669	0.7198975	0.8758842	0.8875988	0.8416281	0.5303093	0.8753246	0.8797696	0.8719707	0.7875424
Glucose transporter 2	0.87624544	0.8728005	1.473532	0.7476115	1.0256311	1.2018362	0.7519941	0.9233873	0.83488784	1.1003	1.166371	1.2550329	1.070684	0.9894177
Mutating resistant protein-2	0.59546843	0.60778378	0.7098141	0.82211506	1.1766303	0.8714485	1.4200497	1.1954697	1.6980016	1.214924	1.3723247	1.1536817	1.03652	1.7228174
Mutating resistant protein-1	0.60555106	0.59706846	0.69228363	0.85211927	1.4027859	0.8814187	1.4447422	1.2871479	1.7363156	1.2287612	1.5078531	1.1705312	1.1718171	1.9785933
Phosphatidylethanolamine-binding protein	1.0184286	0.7650965	0.7349726	1.1904229	1.1894058	1.1348349	1.2407485	1.601112	1.1948817	1.4312906	1.6005602	1.5769914	1.4078586	1.2941403
Phase-1 RCT-100	1.8241313	1.5506789	1.3921574	1.3518351	1.4562566	1.2881371	0.9379289	1.0632817	1.1981786	1.6524805	1.1986594	1.730433	1.3909882	1.3100695
Insulin beta-4	1.4435844	1.1425481	1.1021171	1.8675612	1.1652858	1.1891097	1.1951041	1.1183393	1.2043513	0.9148278	1.265923	1.213507	1.1856871	1.573153
Endogenous retrovirus P450 oxidoreductase	1.1213237	0.87752545	0.9728336	1.606794	1.7995893	2.0279326	1.5591935	1.1363585	1.8091023	0.3086445	3.285765	1.8830866	1.537984	1.704072
Wdr1	1.6902044	1.3274972	1.6123046	1.331713	1.3105865	1.3033761	2.170449	1.2709698	2.2874062	0.93333045	0.76359858	0.78145443	0.81009877	1.0235741
Endogenous retrovirus sequence, 5' and 3' LTR	1.138883	1.7608873	1.0710024	1.1871857	0.7653437	0.8048865	0.92216355	0.96808344	1.0686994	0.77738124	1.4308145	1.1985894	0.82535577	0.7521349
Phase-1 RCT-53	0.8285102	0.5893365	0.8515085	0.9745849	0.9001036	0.8768245	1.13066	0.9700166	1.097189	1.0381868	1.0479908	1.075352	1.059497	1.0701118
Phase-1 RCT-54	1.0652574	1.101874	1.2245046	1.1913763	1.0314059	0.9452327	0.7819547	0.84455016	0.6507484	0.8875883	0.8181613	0.7837215	0.8642544	0.8088043
Osteopontin	1.0512712	1.1643302	1.2387349	0.76885474	0.8087802	0.8280479	0.7832093	0.8592873	0.9304759	1.0413892	1.2656254	1.3257847	1.6215202	1.2812612
Organic anion transporting polypeptide 1	0.8918078	0.7413085	0.6040466	0.69233716	0.800628	0.812032	0.9163627	0.92741465	0.87076804	0.9719005	1.5768786	1.5513865	1.4482728	1.0734624
Phase-1 RCT-241	4.988278	5.2340517	2.0409882	1.2517213	1.2384713	1.0857302	1.0139757	1.3287018	1.2578334	1.2524337	0.7623311	0.8331813	0.72702058	0.3069406
Tissue factor pathway inhibitor	1.778147	1.6473212	1.4459003	1.1626036	1.0351211	0.96892556	1.0714221	1.0304844	1.195742	0.7907195	0.7596306	0.7095274	0.8543542	0.7902061
Cylin-dependent kinase 4 inhibitor P27kip1 (alternativ)	0.83009807	0.79751307	0.8365988	1.1678917	0.97654057	0.80278606	1.4748484	1.0886901	1.1883827	0.7837502	0.73372513	0.70587954	0.702238	0.8249923
Proteinase D	1.0277334	1.0462865	1.042865	1.1117148	1.0290259	1.07148	1.0290259	1.07148	1.0290259	1.07148	1.0290259	1.07148	1.0290259	1.07148
Phase-1 RCT-139	1.948182	1.6907018	1.0206891	1.0001618	0.8457038	0.9082867	1.0321048	1.0321048	1.0321048	1.0321048	1.0321048	1.0321048	1.0321048	1.0321048
Phase-1 RCT-258	1.3078245	1.5029466	1.0519624	1.082581	0.8919205	0.994238	0.457182	1.0270324	0.8623161	1.2051199	0.8852688	1.2074586	0.92544883	0.92544883
Phase-1 RCT-113	1.8770706	1.8973771	1.5388018	0.8328981	0.9478783	0.97517407	0.9453634	0.8677714	1.1872585	1.2809746	1.8727585	1.2970805	1.291271	1.4661425
Adenine nucleotide translocator 1	0.98974884	1.004484	1.0337225	1.0318935	1.1725559	0.7413685	0.7833284	0.9136149	0.7833284	1.1955613	0.97231615	1.0500072	1.0500072	1.2358061
Alpha-1 acid glycoprotein	10.211426	14.559551	12.05066	0.44807184	0.4357361	0.841437	0.74271256	1.077761	0.9282365	0.838936	1.4837459	2.4075847	2.4075847	2.4075847
MHC class II antigen RT1.B-1 beta-chain	0.840287	1.059281	0.6414842	1.2653269	1.0884623	1.4783081	0.9601594	1.8516396	1.0811237	0.5779688	1.1571188	1.3171035	0.63548213	0.91489403

Organic cation transporter 3	1.3537432	1.7077032	1.9552718	0.8235079	0.63378615	0.8063262	0.8534738	1.074377	0.53894714	1.0422381	0.7218598	0.77056118	1.204345	0.9408503
Hypoxia-inducible factor 1 alpha	1.3204832	1.1450992	0.859522	1.6087307	1.0091324	1.0644403	0.78718	1.0132828	0.9377688	0.83673576	0.8523498	0.87819815	0.9770271	0.94055907
Phase-1 RCT-43	1.178727	1.0544515	0.8976506	1.1948121	1.0540243	0.84122155	1.0577789	0.538823	0.9746597	1.1183436	0.8981513	1.018139	1.1303705	0.9575806
Phase-1 RCT-45	1.1487896	0.9742993	1.0636173	1.3530235	1.0473186	0.9488343	0.7611681	0.9171722	0.7907805	0.8084117	0.7508268	0.82782507	0.8756584	0.78593805
Malate dehydrogenase, cytosolic	1.7515208	0.8556724	1.2876025	0.8536706	0.8101537	1.0236982	0.74214853	0.98339045	0.6873183	3.3780445	1.7679778	1.256761	2.0637207	2.0578318
VL30 element	1.4296532	2.1761682	1.104087	1.2510133	1.0447398	0.8855415	1.2104533	0.8594896	0.90724387	0.784723	1.5301894	1.265206	0.5288735	0.41182273
Phase-1 RCT-169	0.5131606	0.5518883	0.88379526	1.075168	1.010407	1.1152421	0.94082413	0.8266473	0.9520122	1.1189541	0.95233945	1.124505	1.1855047	0.80942766
Alpha-fetoprotein	0.7244933	0.7025027	0.83123344	0.9076809	0.9555848	0.8118888	1.1324915	0.96897	0.855421	0.7615498	0.857844	0.7274048	0.88047184	0.9341884
Calgranulin B	0.6578509	0.7287177	0.97123064	0.8037931	0.7044839	0.91342795	1.035139	0.592147	0.85039943	2.1863202	0.732064	0.7407236	0.7676025	0.8057347
Tissue plasminogen activator	0.92463907	0.91001326	0.9556101	0.8984045	0.9101535	0.8540027	1.0523555	1.0082041	1.0389432	0.7294724	0.792064	0.7407236	0.7676025	0.8057347
Phase-1 RCT-195	0.86231836	1.0077478	1.0886918	0.86459	0.8266539	0.8504908	1.0135332	1.0027387	1.0587848	1.2558378	1.1928894	1.1258952	1.1611594	1.213078
Phase-1 RCT-284	0.70659626	0.734916	0.63297325	0.6870081	0.9852496	0.49883243	1.0498312	0.9434023	0.95556074	0.89409487	0.8325181	0.888063	0.8055328	0.78761255
Alpha-1 microglobulin precursor (Antib)	1.0541323	0.9682208	1.0315374	1.124735	1.0769688	1.2163857	1.1471474	0.9755449	1.1297011	0.8314085	0.77983624	0.58476593	0.700201	0.88142915
Phase-1 RCT-151	1.8887034	1.2472316	1.6822016	0.9859635	1.128682	0.9408464	0.92817575	1.117572	0.9831405	1.4828448	1.2760557	1.3585732	1.278823	1.154464
Phase-1 RCT-159	1.235396	1.1895229	1.143745	1.2530653	1.0643113	1.1254882	1.0670931	0.93652335	1.0661761	0.76545316	0.8027189	1.0550431	1.3420081	1.2377556
Phase-1 RCT-221	1.0301074	1.0854243	0.92765795	0.9500947	0.94186916	0.85453577	1.0670931	0.93652335	1.0661761	0.76545316	0.8027189	1.0550431	1.3420081	1.2377556
Phase-1 RCT-235	0.88876875	0.98915003	0.92765795	0.9500947	0.94186916	0.85453577	1.0670931	0.93652335	1.0661761	0.76545316	0.8027189	1.0550431	1.3420081	1.2377556
Organic anion transporter 3	0.6003731	0.8113117	0.7296079	0.73137224	0.81787524	1.0843134	0.95356314	0.8422436	1.008483	0.7059842	0.91549325	0.88209933	0.85965383	0.9493728
Matrix metalloproteinase-1	0.8762247	0.9228188	0.778698	0.7463155	0.7688044	0.7061313	1.2088159	1.0945932	1.2482721	1.3347169	1.0177312	0.92081067	0.96891006	1.0346707
Urinary protein 2 precursor	0.3760987	0.75634384	0.7349845	0.5518371	0.7308858	0.6806781	0.938529	0.7880768	0.8510783	1.2891613	0.88179435	1.2181897	0.8720447	0.6202767
Phase-1 RCT-212	1.0145876	1.0426927	1.1432428	1.0185192	0.9425325	0.8530802	0.8105843	0.88303553	0.8246544	0.9570021	1.0007769	0.97699183	0.9145648	0.94680044
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound-dose group at 72 h: yes=next, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 18 and as included in Table 26)														

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)

Phase-1 RCT-32	0.93706566	0.87090135	0.6783181	0.99020135	0.9735037	1.3715404	1.5506698	0.978657	0.9997157	0.92068765	0.9577333	0.9148216	0.92259683
Peridomase assembly factor 1	0.680117	0.7090879	1.011859	1.3560089	1.2014701	1.1893214	1.4356222	1.3442781	0.981639	1.1214877	0.96714276	1.1291138	0.98798363
8-oxopropionate DNA glycosylase	0.99957096	0.7359022	1.011185	0.84565276	0.880472	0.8762535	0.93131304	1.081193	1.0131531	1.1671679	1.1237055	0.981471	0.806279
Phase-1 RCT-82	0.7426491	0.8027714	0.9853116	0.80717764	0.9430742	0.95517754	0.7957453	0.76997637	0.9050432	0.98849894	0.9388705	0.839874	0.785877
Mainlin F1G	0.8410534	0.9411508	0.2081732	0.90395884	1.1714364	0.7452125	0.76976637	0.7335668	0.8276889	0.79793274	0.91459427	0.443638	0.3200955
Phase-1 RCT-184	0.8603005	0.85326245	0.92727834	0.84930328	0.9404541	0.84930328	0.80450584	0.75846206	0.7395757	0.82874873	0.7671344	0.7521321	0.6488087
Phase-1 RCT-168	0.91214774	0.93657218	0.99178597	0.90024704	0.8406484	0.94665797	0.80590594	0.87129972	0.81519756	0.52192756	0.7671344	0.7027284	0.5803005
Phase-1 RCT-119	0.9325554	0.9585123	0.7514412	0.7377004	0.9768846	1.1320573	0.4487192	0.49750438	0.52056838	0.42945015	0.6819425	0.96989213	0.80044592
Carboxylate hydrolase II	0.885428	0.73406385	0.811272	0.6976374	0.9079463	0.73173237	0.9228288	0.9404028	0.6991688	1.0589145	0.70417035	1.2785974	0.7786853
Thyroidal hydrolase I	0.7426109	1.2872515	0.7358121	1.2563311	0.9095789	1.3095789	0.2160462	1.1602191	1.4555721	1.3358681	1.1769291	1.1005591	0.7584371
Phase-1 RCT-71	1.9355127	1.278932	1.1871951	1.6652004	1.0015367	1.7535436	0.3113149	0.2710462	0.74874769	1.7155123	1.139141	0.3016577	1.9436354
Phase-1 RCT-179	0.6034442	0.3534432	0.4025688	0.34089738	0.50150334	0.5785457	0.47116284	0.6380016	0.6993633	0.7874405	0.572149	0.8279446	0.78659193
Phase-1 RCT-201	1.4105843	0.4554053	0.3664513	0.27170343	0.276434	0.5819826	0.34550978	0.419576	0.4602899	0.471258	0.2620184	0.4846463	1.2695917
Phase-1 RCT-207	1.5797241	3.517054	1.8003561	2.3003542	2.134476	0.3163202	0.3607573	3.9221684	0.42120833	3.0571349	0.3344623	1.431457	1.6977193
Phase-1 RCT-225	0.7674557	7.5371675	8.013704	3.3059582	2.274817	3.7455003	0.439307	6.0022345	5.98821	1.9802423	1.4397321	1.0639042	1.2380788
Oxochromone P450 2E1	0.78784685	0.3988626	0.6163333	0.34987003	0.1550543	0.55687514	0.55687514	0.3025237	0.30684932	0.4431618	0.35407856	0.5515161	0.6889061
Ind-1	0.78780122	1.6651209	1.5748248	1.5343434	1.5343434	1.5748248	0.4597063	0.3522441	0.908568	1.0015687	0.85671475	0.8811225	0.7719383
Thyroidal (I) rdt1	1.093736	2.152462	1.6517862	1.4850017	1.5040743	1.3818938	0.76186466	1.1793953	1.805054	1.945865	0.9804409	0.85671475	0.9519155
Carboxylate hydrolase III	0.34068486	0.147212105	0.2137354	0.71390566	0.38841262	0.33011507	0.16364665	0.16364665	0.16364665	0.90441058	0.52026833	0.15897593	0.174545193
Phase-1 RCT-140	0.9001545	0.2950722	0.9351885	0.7295712	0.7295712	0.9351885	0.1701515	0.87135593	0.55287236	0.55287236	0.44133597	1.4861282	0.4372022
Complement component C3	0.8611644	0.25397107	0.39118033	0.85010903	0.74151626	0.8857689	0.94581178	0.73257512	0.46385192	0.68109114	0.3104879	0.8263874	0.4092244
Glucosephase	0.4234718	0.2609428	0.52985897	0.727291	0.7652781	0.780524	0.84211285	0.8619395	0.1895892	1.1508408	5.42879	8.910581	1.3611303
Senescence marker protein-30	0.7665544	0.7835204	0.9352434	0.82537365	0.9025237	0.9214379	0.9214379	1.13244598	1.2549	1.12344598	1.2549	1.1361428	0.7007224
Phase-1 RCT-173	0.88030934	1.013217	0.53630646	0.8580189	0.9539164	0.95414406	0.11695837	1.0279017	0.6773458	1.55139005	0.8842434	0.9519087	0.7063519
3-methyladenine DNA glycosylase	0.24690255	0.4882257	0.5968336	0.7331123	0.8140461	0.76301684	0.636771	0.7751507	0.5492794	0.5118719	0.43526134	0.9512687	0.4148228
Periplasmic multifunctional enzyme type II	0.9760939	0.5985445	0.5337218	0.7205044	0.70755297	0.81110394	0.54325676	0.6929595	0.28473151	0.40425694	0.30216893	0.6735846	0.38572045
Phase-1 RCT-40	0.49532164	0.2908481	0.33453837	0.32041941	0.4511159	0.35896655	0.26014555	0.3049009	0.9674455	0.6338903	0.85190794	0.9375846	0.38572045
Senescence marker protein-30	0.7665544	0.7835204	0.9352434	0.82537365	0.9025237	0.9214379	0.9214379	1.13244598	1.2549	1.12344598	1.2549	1.1361428	0.7007224
Cyclin G	0.7623177	1.423601	1.6607189	1.2633484	1.501126	1.0817513	1.4630311	1.3386098	2.348218	2.1060928	1.9473763	0.8315437	0.7063519
Melanoma-associated antigen ME319	1.095895	1.8243844	1.882118	2.963484	1.602118	1.521274	0.943685	0.76467035	0.77615494	0.8603984	0.69633386	0.9798628	0.94938664
Phase-1 RCT-28	0.9197438	0.845136	0.93651537	0.921822	0.92869046	0.9434685	0.7417402	0.8880257	0.7679438	0.6124827	1.2985522	0.893406	0.38571012
Alcohol dehydrogenase 1	0.60801814	0.6215275	0.6537357	0.994218	0.948395	0.977826	0.37904268	0.395391	0.35532846	0.6218321	1.2985522	0.893406	0.38571012
Stem cell factor	0.6592439	0.71629526	0.8163406	0.6733004	0.6655918	0.9632076	0.8570498	0.8101548	0.6338903	0.7654664	0.78003534	0.85190794	0.9375846
JNK1 stress activated protein kinase	0.8745278	0.57462956	0.8163406	0.6733004	0.6655918	0.9632076	0.8570498	0.8101548	0.6338903	0.7654664	0.78003534	0.85190794	0.9375846
Protein tyrosine phosphatase alpha	0.6362091	0.264011	0.3564765	0.4355445	0.4355445	0.9197821	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621
Phase-1 RCT-55	1.3416165	1.1512758	0.9780343	1.4892609	1.681017	0.9197821	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621
Ubiquitin ligase	0.9501295	0.2869718	0.4497093	0.8607192	1.4892609	1.681017	0.9197821	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621	0.9207621
DNA topoisomerase I	0.76108465	0.9576332	0.732986	0.6993338	0.877626	0.8993338	0.9576332	0.732986	0.6993338	0.877626	0.8993338	0.9576332	0.732986
Phase-1 RCT-280	1.0859166	1.5877714	1.20785	2.0289687	2.0077472	1.943834	3.4160927	2.6858085	3.39079	1.834014	1.5306855	0.6277425	0.8625545
Retinol-binding protein	0.9894256	0.60669594	0.8972124	0.7291081	0.7291081	0.8972124	0.7291081	0.7291081	0.7291081	0.7291081	0.7291081	0.7291081	0.7291081
Carbamoyl phosphate synthetase I	1.9932496	0.8669919	1.1301641	1.0330582	0.8099113	0.9053536	0.8370267	0.9222901	1.1501794	0.9582719	0.8730425	0.7649389	0.3303805
Glucosyltransferase alpha	0.8148656	0.2860917	0.99860908	0.8136028	0.8136028	0.99860908	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028
Phase-1 RCT-141	1.3846525	0.9147628	0.68945924	1.5889072	1.3901455	1.365735	1.394112	1.221747	1.6423381	1.9442023	1.5452181	0.9145218	0.1458832
Gamma-actin, cytoplasmic	1.647812	2.1027524	0.68945924	1.5889072	1.3901455	1.365735	1.394112	1.221747	1.6423381	1.9442023	1.5452181	0.9145218	0.1458832
Ribosomal protein L13A	1.9827646	1.1686061	2.062769	1.3040919	1.4173352	1.8891319	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028
Phase-1 RCT-65	1.3336276	1.6847693	0.864022	1.6744564	1.9502923	1.9512099	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028	0.8136028
ChUn	1.5473114	0.971849	0.8281035	1.2295191	1.3800625	1.3761686	1.8426359	1.2665501	1.2546318	1.840275	2.040715	1.2408733	1.1280053
Protein O-mannosyltransferase 1 (Pomt1)	1.2520609	1.9715942	1.8453336	2.0498802	1.8273038	1.7556287	1.0088395	1.4730581	1.9057639	1.7935263	1.1940223	1.0004454	1.1280053
HMG CoA reductase	0.96599035	1.2169594	1.1665337	1.346856	1.3547063	1.4613491	1.5892038	1.3397487	2.051663	1.6978005	1.8533133	1.0652502	1.1678504
Phase-1 RCT-12	1.0505267	2.6053054	4.7076125	2.108227	2.2468863	2.0887763	1.6571985	2.3149914	1.2298319	0.95333365	0.94480956	1.942968	1.6200391
Interferon related developmental regulator 1 (IRF1)	0.68817765	2.4397883	1.5897093	2.7077234	2.1652147	2.7658149	5.8805292	4.545631	0.51485758	0.50223344	0.57732783	3.7376173	2.9443165
Glucose-regulated protein 78	0.74447103	0.8009439	0.7755619	0.9304191	0.779442	0.7458882	0.86891165	0.729501	0.7266947	0.90439685	0.7397394	1.1988218	0.9423013
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.9390939	0.94632185	1.3151512	3.4051418	3.962217	2.0501547	7.3232384	6.749555	1.1530595	1.0050522	1.141351	0.8747366	1.2263053
Caspase 6	0.69171846	1.3354717	2.0335918	1.3128893	2.0824984	1.4088689	1.2682589	1.4033368	0.9704199	1.2682589	1.2682589	1.2682589	1.2682589
Phase-1 RCT-169	0.8449809	0.9682734	1.3855793	1.7047267	1.860463	1.85167	2.1445147	2.618018	2.351317	2.9793854	1.608432	2.67713	1.3344987
Phase-1 RCT-34	1.2945007	6.251641	6.081258	1.3895841	2.4088078	3.02467	2.300364	2.348732	3.369265	0.75623754	0.9878992	0.65407655	0.7352863

Table 28

Phase-1 RCT-72	1.605539	1.7562784	1.6021814	1.7512926	2.0971466	2.139062	1.4784483	1.0809506	1.685314	1.1816729	1.4810263
Phase-1 RCT-72	1.79406	1.9241703	1.7307527	1.7473221	3.425483	3.288254	2.8736993	1.5516709	1.15879	1.2984895	2.5847037
Phase-1 RCT-288	1.094331	0.8703787	1.69931965	0.76594193	0.441312045	0.57205809	0.45602146	0.482085575	0.55382718	0.41167507	0.08654917
Phase-1 RCT-50	1.6946161	1.26533692	1.318112	1.1516389	0.73132599	0.73132599	0.71788277	0.16572864	0.07359673	0.0866189	0.48481035
Phase-1 RCT-50	1.4294702	0.4277663	0.9275725	0.8788171	0.69374803	0.44895937	0.32132599	0.63903132	0.6869601	0.2113319	0.13196839
Cytidine P450 2C39 (alternate clone 2)	1.69885	0.6394002	1.065130	1.0668138	1.7500026	0.58930707	0.68315347	0.9758906	0.01155791	0.97772048	0.76651177
Phase-1 RCT-290	1.0245043	0.812453	0.6523393	0.8921551	0.82023275	1.018218	0.64454854	0.75493137	0.7061891	0.8705335	0.52772285
Phase-1 RCT-290	0.96531705	0.40749645	0.6320035	0.6527873	0.950636817	0.56042955	0.3491181	0.95033968	0.59011895	0.7607432	0.39823695
Cytochrome P450 C4, recombinant alpha	0.7337377	0.634993	0.9242209	0.74243045	1.0815878	1.06534842	0.96460162	0.762007651	0.7402919	0.7607432	0.39823695
Cytochrome P450 1A2	1.1973058	0.504228	0.72925884	1.1532899	1.3205959	1.1287134	1.6303947	1.6865462	1.5347521	1.5787635	1.1240871
Monomarinic oxidase B	0.6954665	0.8295457	0.89716674	0.89716674	0.9426104	0.8101564	0.8101564	0.367333	0.3202005	0.5562544	0.8736394
Phase-1 RCT-284	0.8959651	0.9295457	1.3557857	0.6842306	0.6525506	0.2689302	0.50467247	0.1671935	0.3251623	0.9487291	0.6150915
Phase-1 RCT-284	0.6946236	0.657659036	0.6458802	0.4515298	0.4515298	0.4515298	0.4515298	0.4515298	0.4515298	0.4515298	0.4515298
Phase-1 RCT-148	1.027201	0.942165	1.031336	0.9655912	0.914231	0.842006	0.842006	0.842006	0.842006	0.842006	0.842006
Phase-1 RCT-148	1.4287173	0.8441165	0.7144395	0.8341486	0.8202687	0.78883694	0.78883694	0.78883694	0.78883694	0.78883694	0.78883694
Phase-1 RCT-148	1.2797942	1.0337821	0.6983283	0.9256433	0.98416483	0.98416483	0.98416483	0.98416483	0.98416483	0.98416483	0.98416483
Adipic acid methyltransferase	2.1414377	0.7788407	0.49802627	0.6954597	0.870739	0.870739	0.870739	0.870739	0.870739	0.870739	0.870739
Phase-1 RCT-281	1.195841	1.4400989	1.2095377	0.7823668	0.618282	0.954739	0.954739	0.954739	0.954739	0.954739	0.954739
Phase-1 RCT-281	0.745953	1.116535	1.182572	0.9036412	0.9297518	1.1571782	1.2629274	1.1686086	0.9328714	0.8846134	0.9686338
Ciliary neurotrophic factor	0.9262646	0.8846516	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455
Gap junction membrane channel protein beta 1 (Gp1)	1.2785113	0.9262646	0.8846516	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455	0.87826455
Phase-1 RCT-267	1.7561925	1.0958311	0.9875765	1.213781	1.1928657	1.2506132	1.5954781	1.3357491	1.0571899	1.0693339	0.820021095
Phase-1 RCT-267	1.3527448	1.1945313	0.7038368	0.8894467	0.9417581	0.8268098	0.6728432	0.6728432	0.6728432	0.6728432	0.6728432
Phase-1 RCT-267	1.8892082	0.7477932	0.6230523	0.68511925	0.9008841	0.7366943	0.6251357	0.7116534	0.63498716	0.84216097	0.8011715
Rainbow-binding protein (RBP)	1.8623063	0.8453108	0.86798467	0.8951128	0.79433976	0.6535107	0.73075624	0.60949629	0.49780043	0.7703495	0.8212074
Very dry domain soy-Cdk synthetase	1.805063415	1.8435167	0.90707935	1.2151071	1.3960745	1.2584818	2.23710036	2.9509493	1.12059878	1.7024958	1.0334765
Synthetic-1	1.00063191	1.247481	1.1083956	1.0016623	1.036157	0.999407	1.0511131	1.281132	0.9478695	0.9171945	0.9369482
Synthetic-1	1.4093362	2.2853792	0.8504986	1.4562881	1.2105727	1.09444	1.387472	1.5380406	1.779954	1.2863219	1.2854621
Phase-1 RCT-145	1.0086191	1.011621	0.87543017	0.8355533	0.9110534	0.82397198	0.70243956	0.60409396	0.64976697	0.6524735	0.5335085
Phase-1 RCT-145	1.0571624	0.6431	0.6265705	0.6431	0.6431	0.6431	0.6431	0.6431	0.6431	0.6431	0.6431
Phase-1 RCT-89	1.3710823	0.878492	0.910868	1.2673841	1.4873061	1.3852182	1.1542474	1.2307341	0.94546937	0.9017213	0.70532227
Alpha-2-macroglobulin, sequence A1Phase	1.625697	1.2054618	1.17171525	1.0627175	1.069588	1.069588	1.069588	1.069588	1.069588	1.069588	1.069588
Alpha-2-macroglobulin, sequence Z	0.90952355	1.2025608	0.84032433	0.98172983	0.91250951	0.91250951	0.91250951	0.91250951	0.91250951	0.91250951	0.91250951
Phase-1 RCT-204	1.1886527	0.63937667	1.2101804	0.89505036	0.9757528	0.9749777	0.94059635	1.0510687	0.8906874	1.2344951	0.9830063
Vascular endothelial growth factor	1.2047809	0.76618695	0.62308085	0.71136993	0.7778208	0.7711077	0.76217433	0.3940006	0.482555028	0.61137375	0.44652387
NAADP-dependent isocitrate dehydrogenase, cytosolic	1.100436	1.65888	0.5949372	1.0416534	0.9111484	0.99591047	0.7600025	0.8256387	0.8482248	1.1149481	0.71767842
DNA binding protein inhibitor ID2	1.4814534	1.7756964	0.8030113	0.81917675	0.7063361	0.7383462	0.5470037	0.6903397	0.7017724	0.4193708	0.7620771
Glutathione S-transferase Yc	1.3815439	1.7140375	1.4717038	1.087284	1.0941109	1.129784	1.056092	1.1692771	0.78237045	0.556421	0.48883054
Epoxide hydrolase	0.7983439	0.8554928	0.45916185	0.9471687	0.8535534	0.78302103	0.46765643	0.5080724	0.60478915	0.4962642	0.6948222
Insulin-like growth factor I	0.95339215	1.1696035	1.329744	1.459983	0.9382255	0.9424291	0.271611	1.31726	1.4509884	0.9262912	0.8342728
Prostaglandin H synthase	1.278292	1.4295005	1.2323147	1.5891674	0.8631871	0.9835836	0.9429697	0.8221786	0.3575735	0.3934937	0.3741857
Phase-1 RCT-136	1.0164443	0.69679124	0.4606945	0.5674108	0.6215746	0.6198183	0.33729786	0.4269881	0.4066204	0.65724655	0.3919437
Phase-1 RCT-137	1.0146443	0.9311065	0.7946494	1.1985254	1.0616553	1.1446245	1.0017418	0.96812376	0.9891192	0.7138552	0.8071861
Phase-1 RCT-138	0.98661198	0.75996757	0.8874578	0.801741586	0.781614586	0.82847164	0.7386862	0.6553399	0.9399742	0.717527475	0.5351327
Hepatic lipase	0.6559238	0.7404755	0.895157	0.76164596	0.76003295	0.7659317	0.51981756	0.9276845	0.6126071	0.9819737	0.9251458
Phase-1 RCT-164	1.7047053	1.00939966	1.0090926	0.937928	1.009949	0.9459673	0.9459673	0.9459673	0.9459673	0.9459673	0.9459673
Adip-Cdk dehydrogenase, medium chain	0.864191	1.8504561	1.5742805	1.2265201	2.4892833	1.1481072	1.4135304	1.4335402	1.4519048	1.3101182	1.1151714
Glutathione S-transferase Yb2 subunit	1.9933307	0.908027	0.54071715	0.7645245	1.0011334	0.7385594	0.4747517	0.7631365	0.80819705	0.8371604	1.0605997
Carbonyl reductase	1.2131924	0.908027	0.54071715	0.7645245	1.0011334	0.7385594	0.4747517	0.7631365	0.80819705	0.8371604	1.0605997
Phase-1 RCT-166	1.473426	0.711053	0.6967338	0.76209458	0.8404108	0.86216784	0.958404	0.939947	0.9492253	0.7076112	0.5686182
Apoptin-1	1.473426	0.711053	0.6967338	0.76209458	0.8404108	0.86216784	0.958404	0.939947	0.9492253	0.7076112	0.5686182
UDP-glucuronosyltransferase	0.80247974	0.9945454	0.8871551	0.9152332	1.2246592	1.0269729	0.9346592	1.0397399	1.0653169	0.930371	0.6716786
Glutathione S-transferase P1	0.91715938	0.23565017	0.42414446	1.2539272	0.9346592	1.0269729	0.9346592	1.0397399	1.0653169	0.930371	0.6716786
Disulfide isomerase related protein (EP072)	0.91762555	0.937008	0.7574031	1.0295368	0.917294	0.917294	0.917294	0.917294	0.917294	0.917294	0.917294
Ribosomal protein L13	1.069294	0.9069273	0.540242	0.91821367	0.8085105	0.7696307	0.81665355	0.83067236	0.49168134	0.7354876	0.50612476
Carboxylase	1.3379667	1.1168385	0.8619284	1.1237355	0.9275411	0.92837434	1.0451236	1.0435778	0.9250291	0.74521865	0.65085336
Inter-alpha-trypsin inhibitor H4 heavy chain (Ilt4H)	0.6505208	0.804292	0.501967	0.8275411	0.9275411	0.92837434	1.0451236	1.0435778	0.9250291	0.74521865	0.65085336

Phase-1 RCT-3	0.7690056	1.076447	1.0939782	0.9582916	0.9247011	0.8945101	0.7434111	0.9550708	0.9022414	0.9842057	1.0390307	1.1520487	1.3774238
Faun beta (Feub)	1.575596	0.4016285	0.267315	0.7255435	0.1071281	0.8339909	0.3603966	0.7205267	0.94352317	0.72833115	0.82568076	1.427682	
3-hydroxybutyrate dehydrogenase	1.267093	0.9143076	0.8566018	0.7198897	0.8451905	0.8213481	0.71590674	0.65936974	0.64931464	0.7761677	0.90812445	0.7316372	
Carbonic anhydrase III, sequence 2	1.2803984	0.49008128	0.3251073	0.5759157	0.936397	0.8342833	0.4875162	0.5054663	0.73017836	0.4810866	0.9170487	1.5136932	
Phase-1 RCT-10	1.4409587	0.7034323	0.51335374	0.72469284	0.6829881	0.6162768	0.4871063	0.5819161	0.4042945	0.30749255	0.89489205	0.5933277	
Alpha-2-microglobulin	1.221583	0.9636562	0.8420707	0.39939877	0.6177354	0.5894934	0.3102868	0.4871063	0.5819161	0.4042945	0.30749255	0.89489205	0.5933277
Dynactin-1 (D100)	0.7436265	0.96397508	0.9202073	0.735462	0.87943534	0.9331812	0.6501768	0.89936726	0.8804812	0.8576619	0.9802495	0.8877194	
Lysyl oxidase	2.2316973	0.65625453	0.9731258	1.3594415	0.8659033	1.0494912	0.1969478	0.8659033	1.0494912	0.1969478	0.8659033	1.0494912	
Phase-1 RCT-252	0.62816724	0.780024	0.9731258	1.3594415	0.8659033	1.0494912	0.1969478	0.8659033	1.0494912	0.1969478	0.8659033	1.0494912	
Phase-1 RCT-28	0.98655177	1.300454	1.8509464	1.1470088	1.0698712	1.081148	0.348467	1.1967325	0.8333455	0.19474336	0.56033715	0.3281167	
Phase-1 RCT-278	1.2531011	0.97245338	0.89701606	0.7965056	0.8119833	0.8097089	0.79707405	0.8119833	0.8097089	0.79707405	0.8119833	0.8097089	
Phase-1 RCT-25	1.2653973	0.7275683	1.0270705	0.9494841	0.8906892	0.9494841	0.8176123	0.8906892	0.9494841	0.8176123	0.8906892	0.9494841	
Cytochrome P450 2C11	0.84703433	0.91670028	1.1296113	0.5128109	0.7778012	0.7267173	0.6483044	0.80971565	0.7267173	0.6483044	0.80971565	0.7267173	
Phase-1 RCT-202	1.4661187	0.7108068	0.6548718	0.7267173	0.6483044	0.80971565	0.7267173	0.6483044	0.80971565	0.7267173	0.6483044	0.80971565	
Proliferating cell nuclear antigen gene	1.9674892	0.7143198	0.7995934	0.8515901	1.002983	0.8845129	0.8807102	1.002983	0.8845129	0.8807102	1.002983	0.8845129	
Activating transcription factor 3	0.7055165	3.060033	25.913933	1.7163788	1.438048	3.007331	1.7502118	1.6803215	2.788536	4.951724	2.4110086	9.10336	
Focal adhesion kinase (p125FAK)	0.74363166	1.0788057	0.88502824	0.9476976	0.816976	0.8039607	0.4903911	0.54360053	0.57642025	0.61259246	0.6914029	0.5849628	0.6661767
Phase-1 RCT-289	1.1815758	0.7399429	0.7361667	0.757779	0.790188	0.8039607	0.4903911	0.54360053	0.57642025	0.61259246	0.6914029	0.5849628	0.6661767
Phase-1 RCT-269	0.9364912	1.1594729	1.0833313	1.2204063	1.221383	1.1587579	1.1906124	1.1834676	1.3246932	1.9607171	1.2379881	1.8993477	0.440595
Iron-responsive element-binding protein	1.6783947	0.4641822	0.49818538	0.5467172	0.6202594	0.8875938	0.9063271	0.922027	0.9200808	0.59399475	0.6952427	0.5677659	0.7518585
MHC class I antigen RT1 A10 alpha-chain	1.0691044	1.6154394	1.1893224	1.8027393	1.5763335	2.1886572	2.2453513	2.1832424	1.982437	2.3039837	2.375702	2.9535883	1.530735
AVI sulfotransferase	1.1323982	0.37316972	0.466206	0.7705742	0.8218216	0.8694966	0.4398555	0.42940102	0.5447164	0.6025198	0.57217345	0.97918075	1.0791214
Phase-1 RCT-171	0.88332794	4.217631	3.0223002	1.2935977	1.4780784	1.6231786	1.7657489	1.9949212	1.0872211	1.071482	0.97217345	0.97918075	1.0791214
Phase-1 RCT-43	0.66379505	0.57780215	0.6827723	0.734898	0.76842833	0.68845004	0.63403013	0.6130616	0.522361	0.65947245	0.7438034	0.6526623	1.1528116
Phase-1 RCT-270	0.9852139	0.28924316	0.30678255	0.42773276	0.5845848	0.6001654	1.5532322	1.3945118	1.4828888	1.0085628	0.9848374	1.0501423	1.052622
Calmodulin-stimulating factor-1	1.6167281	0.8822437	1.0862149	1.0095385	1.0924473	0.9001654	1.5532322	1.3945118	1.4828888	1.0085628	0.9848374	1.0501423	1.052622
Neurotrophin	0.9025749	4.4551457	0.8943846	0.94862654	1.0244616	0.9452916	0.9197071	0.922027	0.9200808	0.59399475	0.6952427	0.5677659	0.7518585
Phase-1 RCT-42	1.0378498	0.5447237	0.3026077	1.3060723	1.3678761	1.6259955	1.7980571	1.9777837	2.381552	2.8008019	1.3046211	0.9795385	1.530735
Phase-1 RCT-22	1.1418693	0.59525059	0.6368966	0.9487965	0.82511845	0.9351244	1.1270985	1.0632788	0.73307866	0.67270553	0.8730846	0.82634103	
AT3	0.9353478	0.80470569	1.2349016	0.900788	0.92878395	0.9384087	0.75212264	0.87915534	0.7845658	0.9615662	1.1645761	1.529136	1.3335355
Phase-1 RCT-18	0.748817	0.5859311	1.030828	0.89715055	0.91665715	0.9115502	0.7633827	0.78235566	1.0719212	0.9259651	1.0218002	0.86526614	0.6817089
Phase-1 RCT-123	0.77413833	0.9553658	0.862116	0.9075355	0.9076880	0.96675247	0.76317056	0.8025874	1.010471	0.9495598	1.0563363	0.9628128	1.2067289
Phase-1 RCT-65	0.8776388	0.4403439	0.9457834	1.0401405	1.1063148	1.1420103	1.3685336	1.2871989	0.5798108	0.85027466	0.52227115	1.2234718	1.0994276
Equilibrative ribonucleoside/nucleoside transporter	0.8715434	0.53494364	0.44810896	0.5787474	0.8435618	0.5876967	0.49503452	0.49750012	0.4519077	0.52313083	0.6985533	0.53878043	0.72394355
Glucose transporter 2	1.228162	1.842438	1.5345933	1.2352277	1.7503878	1.5880915	1.6171918	1.7601007	1.3892057	0.48265715	0.6718653	0.7178653	
Multidrug resistant protein-2	1.5154055	1.2488911	2.0053098	1.6261132	1.7449961	1.4295935	2.8007103	2.6010973	2.2314851	1.4589126	1.234243	1.4021882	0.711643
Multidrug resistant protein-1	1.7889899	1.2194726	2.0891721	1.5962315	1.4991003	1.4088299	2.4402305	2.1625788	2.0818512	1.3448782	1.1854193	1.4592555	0.8808751
Phosphatidylinositol-3-OH kinase	1.5985539	1.1677167	0.8251732	1.228001	1.1198397	1.3965826	1.0162399	1.0103179	0.967312	1.8076031	1.08916	1.789436	0.703993
Phase-1 RCT-180	1.4201331	1.1617637	1.3940937	1.4070307	1.3807008	1.1516538	1.6127186	1.7807875	1.7981528	1.493479	1.3986234	1.4035887	1.262315
IL-18	1.0363377	1.0826016	1.216369	1.0506382	1.1610376	1.0161141	1.2358633	1.2353239	1.1844147	1.3344028	1.2271284	1.1947988	1.0207181
NADPH cytochrome P450 oxidoreductase	3.2657955	0.660144	0.94765896	1.5222464	1.4470071	1.9115843	1.8581034	1.5537835	1.7538813	2.7568848	1.8897557	1.7049395	0.9564862
Wdr1	0.8310488	1.3573456	1.4912808	1.303027	1.1454095	1.1591333	1.5165863	1.3578335	1.216768	2.8773384	2.094965	4.4103885	1.0429772
Endogenous retrovirus sequence, 5' and 3' LTR	0.75755221	3.1550017	3.23323248	1.6909548	1.6750518	1.9349821	3.8337482	2.548478	2.6264768	0.7549245	0.7755245	0.62078494	0.95143966
Phase-1 RCT-53	1.163242	1.1151935	2.2652133	0.8791321	0.8919222	0.94042283	0.9348931	0.87853695	0.8158814	1.4891045	1.4922466	1.2920774	0.8645849
Phase-1 RCT-54	0.8871614	1.2105226	1.5785408	0.974371	1.0843661	1.130303	0.963283	1.0348188	1.631824	1.4843559	1.6515245	0.8212345	0.9018655
Phase-1 RCT-240	0.8160097	1.2533384	1.0565246	0.974371	1.0843661	1.130303	0.963283	1.0348188	1.631824	1.4843559	1.6515245	0.8212345	0.9018655
Osteopontin	1.7122266	0.6827101	0.5565333	0.8383603	0.971776	0.8225303	0.91081888	0.8597165	0.83553167	0.82318044	0.7670798	0.71572038	1.0087905
Organic anion transporting polypeptide 1	1.0561644	0.9352096	3.4884732	1.66178	1.2595328	1.0353825	0.8817961	0.82191153	1.045952	0.76391387	1.0311595	0.5719169	0.6728017
Phase-1 RCT-241	0.77054065	1.9391848	1.5588313	1.187793	1.1387742	1.405803	1.5395158	1.879062	1.3876302	1.3357165	0.9995984	1.1633984	3.302751
Tissue factor pathway inhibitor	0.7072072	0.9658679	0.92617023	1.2133422	0.8836214	1.0738444	0.8818546	1.1353949	1.1833875	0.9949493	1.1246547	1.0570847	2.4100811
Cyclic-dependent kinase 4 (inhibitor P27/Np) (alternates)	0.7367684	2.4617383	2.7589151	1.9880528	1.6078707	2.1350653	2.072652	2.0743992	2.0743992	1.817299	1.4534372	1.9073791	0.9882213
Phase-1 RCT-5	0.6072967	1.2665305	1.2634386	1.273741	1.3506504	1.5824206	1.78192835	1.688655	1.1332811	1.0184197	1.1659371	1.1557514	1.1778874
Phase-1 RCT-39	1.217334	1.2567873	1.2408265	1.5304945	1.5406138	1.6019932	1.2105551	1.7272767	1.674628	1.6944017	1.3235313	1.4974394	1.2484177
Phase-1 RCT-258	1.0367173	1.2845482	1.2329962	1.2460943	1.2269363	1.2269363	1.2184667	1.3197167	1.3857153	1.1981913	1.0168817	1.0312608	0.9380529
Phase-1 RCT-113	1.3688078	1.1668078	0.9632088	1.0305027	0.927841	1.023018	1.0345726	0.95892	0.9672784	1.4495952	1.3029951	1.4002857	1.1639532
Adenine nucleoside translocator 1	1.3789457	0.6547081	0.897232	1.012843	1.2158667	1.2158667	1.012843	1.2158667	1.2158667	1.012843	1.2158667	1.2158667	1.012843
Alpha-1 acid glycoprotein	1.4127148	0.9586765	0.71651073	1.383678	1.0173521	1.6145632	1.5484849	1.4663186	2.3195363	2.1705917	1.502966	31.327219	38.506073
MHC class II antigen RT1 B-1 beta-chain	0.61415976	1.0250122	0.815573	1.230103	1.5131824	1.0455581	0.8425204	0.8425204	0.8425204	0.8425204	0.8425204	0.8425204	0.8425204

Table 28

Organic cation transporter 3	1.2317422	1.3045697	1.032418	1.2885575	1.3571369	1.100800	1.7612047	1.581279	1.4902891	1.2528077	1.068767	1.194646	1.3168337	1.6819305
Hypoxia-inducible factor 1 alpha	0.86015143	0.860184	1.706212	1.0920081	1.1329826	1.0536685	1.3435054	1.3077757	1.4366746	0.86038107	0.8738076	0.700669	0.84720814	0.833358
Phase-1 RCT-43	1.1309488	1.2231051	1.375906	0.8824867	0.92333516	0.9737253	1.0427649	0.9303925	0.85726347	1.5522428	1.3757614	1.343541	0.8646597	0.789426
Phase-1 RCT-45	0.87594265	1.1414998	1.078503	1.0853586	0.8469616	0.8952073	0.9012313	0.7065459	0.73663276	0.69163464	0.70000076	0.7987795	0.81966015	0.8400881
Malate dehydrogenase, cytosolic	2.4468155	0.4623394	0.4633243	0.897013	2.6572947	1.6157024	2.935202	6.0762467	4.273827	0.1250467	1.0163594	0.8913139	0.7274023	0.24127454
VI-30 element	0.65965205	0.5903493	0.6399075	0.8399075	1.041808	0.91859275	0.8668164	0.5292517	0.6948884	0.6401344	0.6941226	0.7435171	0.5907075	0.8129003
Phase-1 RCT-189	0.8068684	0.5903493	0.6399075	0.8399075	1.041808	0.91859275	0.8668164	0.5292517	0.6948884	0.6401344	0.6941226	0.7435171	0.5907075	0.8129003
Alphalegalanin B	1.7706771	0.6794586	0.5537807	0.6351688	0.9206985	1.3627281	1.3980073	1.5450765	1.4245417	0.6495005	0.8049223	0.7152626	1.1477815	1.030289
Tissue plasminogen activator	0.8172326	0.9997003	1.0067439	0.851688	0.9206985	1.3627281	1.3980073	1.5450765	1.4245417	0.6495005	0.8049223	0.7152626	1.1477815	1.030289
Phase-1 RCT-196	1.2913831	1.0014521	0.89281165	0.9177454	1.0058378	0.8631488	0.8631488	0.8631488	0.8631488	0.8631488	0.8631488	0.8631488	0.8631488	0.8631488
Liver cell acid binding protein	0.88961846	0.7515554	0.40380043	0.8051332	0.93551075	0.8285734	0.8986654	0.897637	0.82338736	0.77967423	0.9028517	0.92034025	0.8933159	1.160536
Alpha-1 microglobulin/beta2-microglobulin precursor (Amp)	1.7672657	0.84572766	0.64819163	0.82985234	0.8688654	1.0712765	0.897637	0.82338736	0.77967423	0.9028517	0.92034025	0.8933159	1.160536	1.160536
Phase-1 RCT-294	0.73158765	1.0927681	1.1407583	1.0190665	1.0712765	0.897637	0.82338736	0.77967423	0.9028517	0.92034025	0.8933159	1.160536	1.160536	1.160536
Phase-1 RCT-151	1.3090081	0.59424675	0.60035864	0.88819465	0.8202499	0.9067048	0.93119156	0.9404508	0.8889048	0.8956883	0.8956883	0.8956883	0.8956883	0.8956883
Phase-1 RCT-158	0.74841084	1.2118151	1.6058261	1.3216422	0.94215226	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746
Phase-1 RCT-221	1.40588	1.2531507	1.089965	0.96738774	0.9301572	1.0352503	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746	1.0302746
Phase-1 RCT-235	1.3052732	1.2579489	1.3024855	0.9594677	0.97901237	0.99888116	0.9217549	0.82415706	0.74864244	0.83074594	0.74523276	0.95953975	0.85782316	0.71033704
Organic anion transporter 3	0.7832532	0.94709594	1.7612103	0.8177833	1.007456	0.8430413	0.82415706	0.74864244	0.83074594	0.74523276	0.95953975	0.85782316	0.71033704	0.71033704
Matrix metalloproteinase-1	1.0097085	2.2192856	1.0873777	1.5778139	1.8503144	1.6188367	3.1427984	2.6413348	3.2151663	1.2833747	1.1878209	1.369808	0.9790733	1.2268183
Urinary protein 2 precursor	0.7735106	0.4575613	0.15526676	0.48416182	0.5594658	0.44183472	0.2012278	0.27088163	0.25410684	0.5386493	0.5307884	0.5043692	1.3063173	1.3042926
Phase-1 RCT-212	0.63942064	1.0733169	0.9866604	1.5890073	1.3788545	1.5949147	4.0689783	2.5560122	2.3504655	1.2606567	1.0585625	0.9083719	1.0228524	1.011855

(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).

(2) Compound and dose abbreviations as in Table 1.

(3) Individual animal number

(4) Liver inflammation classification for compound-dose group at 72 hr: yes= necrosis observed; yes= both, necrosis with inflammation observed; no, no histopathology observed

(5) Predictive gene (as in Table 18 and as included in Table 25)

Table 28

Table 28. Expression Data for 6 Hour Timepoint (1)		
Compound/Dose (2)	LPS 6	
Animal Number (3)	353	
Liver Toxicity Inflammation Classification (4)	yes-both	
Gene Name (5)		
Insulin-like growth factor binding protein 1	4.568517	
Gadd153	2.851768	
c-myc	1.998253	
NFkB	1.1386163	
Cathepsin L, sequence 2	2.0065484	
Heme oxygenase	4.120745	
Phase-1 RCT-108	1.2147709	
Phase-1 RCT-111	0.8824904	
Argininosuccinate lyase	1.323768	
DNA polymerase beta	1.3928855	
Phase-1 RCT-103	0.9464983	
Ribosomal protein S9	1.352015	
Phase-1 RCT-114	1.2587955	
Phase-1 RCT-15	1.6526421	
Macrophage inflammatory protein-2 alpha	2.5921078	
NGF-inducible anti-proliferative putative secreted protein (PC3)	2.8346636	
Phase-1 RCT-181	1.0781014	
Phase-1 RCT-63	2.400022	
Cyclin D3	2.3634803	
Phase-1 RCT-108	0.8178527	
Phase-1 RCT-58	60.688166	
Phase-1 RCT-192	1.0859823	
Phase-1 RCT-75	1.1048214	
Acetyl-CoA carboxylase	0.7213042	
Phase-1 RCT-95	0.9316693	
Cystatin C	1.345321	
Phase-1 RCT-49	2.2827415	
Phase-1 RCT-9	2.542881	
Gadd45	3.5787094	
Phase-1 RCT-156	0.9610277	
Cofilin	1.5795441	
Phase-1 RCT-127	1.6490371	
Macrophage inflammatory protein-1 alpha	2.5032089	
Zinc finger protein	2.420045	
Phase-1 RCT-73	0.5959307	
Glutamine synthetase	1.4402163	
Calc-binding protein	2.1400852	
Phase-1 RCT-242	3.6428814	
Phase-1 RCT-30	2.5695453	
Elongation factor-1 alpha	1.3882423	
Interferon beta1	1.8610729	
Insulin-like growth factor binding protein 5	1.4014114	
Phase-1 RCT-59	0.82816344	
Phase-1 RCT-76	1.2673161	
Fertilin H-chain	1.4359804	
Selenoprotein P	0.4084829	
PTEN/MMAC1	0.5242306	
Phase-1 RCT-214	0.54829166	
Phase-1 RCT-112	0.6595692	
Thymidylate synthase	0.46143058	
Phase-1 RCT-73	1.0316368	
Nucleosome assembly protein	0.6796462	
Cholesterol 7 alpha-hydroxylase (P450 uII)	0.765073	
Vesicular monoamine transporter (VMAT)	0.7472657	
Phase-1 RCT-260	0.71883576	

Table 28

Phase-1 RCT-32	0.7401505
Peroxisome assembly factor 1	1.2273716
8-oxoquinoline DNA glycosylase	0.9434693
Phase-1 RCT-82	0.9055276
Mafin F/G	0.33845293
Phase-1 RCT-184	0.80475354
Phase-1 RCT-168	0.55317867
Phase-1 RCT-119	0.56330987
Carbonic anhydrase II	0.7887593
Tryptophan hydroxylase	0.70211387
Phase-1 RCT-71	1.3607856
Phase-1 RCT-179	1.7305132
Phase-1 RCT-161	0.9114856
Phase-1 RCT-207	0.7206125
Phase-1 RCT-144	1.3412372
Phase-1 RCT-225	1.6334157
Cytokine P450 2E1	0.6842659
ID-1	1.2712274
Thioredoxin-1 (Trx1)	2.7709494
Carbonic anhydrase III	0.1100089
Phase-1 RCT-140	0.52821266
Complement component C3	1.5176481
Glucokinase	0.5141817
Phase-1 RCT-173	0.3338588
3-methyladenine DNA glycosylase	0.9985169
Peroxisomal multifunctional enzyme type II	0.71914285
Phase-1 RCT-40	0.4984311
Senescence marker protein-30	0.23705378
Cyclin G	2.611184
Melanoma-associated antigen ME491	2.1062632
Phase-1 RCT-28	1.0913836
Ermotin	0.53174365
Alcohol dehydrogenase 1	0.22452127
Stem cell factor	0.34132013
AK1 stress activated protein kinase	0.95233355
Protein tyrosine phosphatase alpha	0.8505762
Phase-1 RCT-35	1.8776507
Ubiquitin conjugating enzyme (RAD 5 homolog)	1.857328
DNA topoisomerase I	1.5181628
Phase-1 RCT-290	0.9014247
Superoxide dismutase Mn	21.8153
Beta-tubulin, class I	1.3606906
Carbamyl phosphate synthetase I	0.5134964
Dialcylglycerol kinase zeta	1.036547
Phase-1 RCT-141	7.081637
14-3-3 zeta	1.5407195
Gamma-actin, cytoplasmic	1.940018
Ribosomal protein L13A	1.5530978
IKB- α	1.2574182
Phase-1 RCT-65	1.6146058
C-Jun	1.250455
Protein O-mannosyltransferase 1 (Pomt1)	1.2683154
HMG CoA reductase	0.98638916
Phase-1 RCT-12	1.1958736
Interferon related developmental regulator IFRD1 (PC4)	1.4814252
Glucose-regulated protein 78	2.6067746
3-beta-hydroxysteroid dehydrogenase (HSD3B1)	0.5904704
Caspase 6	0.8847196
Phase-1 RCT-169	48.983387
Phase-1 RCT-197	1.2471777
Phase-1 RCT-34	0.7838734

Table 28

Phase-1 RCT-72	1.5678983
Pyruvate kinase, muscle	1.8940941
Phase-1 RCT-288	0.46658143
Phase-1 RCT-90	0.0675073
Cytochrome P450 2C39 (alternate clone 2)	1.2018036
Phase-1 RCT-290	0.45444484
Phase-1 RCT-261	1.8972265
Methylcrotyl-CoA reductase alpha	1.4112136
Cytochrome P450 1A2	0.85475254
Phase-1 RCT-297	1.4289218
Monomamine oxidase B	0.89664174
Phase-1 RCT-264	1.0396919
Perisome proliferator activated receptor gamma	0.36507794
Phase-1 RCT-143	0.87238665
Phase-1 RCT-251	0.87241724
Phase-1 RCT-117	0.65981558
Glutathione S-transferase theta-1	0.64593244
Phase-1 RCT-91	0.74357233
Phase-1 RCT-148	0.54769907
Phase-1 RCT-142	1.0775359
Activin receptor type II	1.2258295
Glycine methyltransferase	0.58525884
Phase-1 RCT-281	0.6371715
Ciliary neurotrophic factor	1.0356685
Gap junction membrane channel protein beta 1 (Gjb1)	0.355682
Phase-1 RCT-98	0.42465898
Phase-1 RCT-287	0.7561602
Retinol-binding protein (RBP)	0.7167043
Very long-chain acyl-CoA synthetase	0.7138629
Syndecan-1	0.8847882
Sialin	0.71001885
Phase-1 RCT-145	0.8149781
Amin	0.81620055
Phase-1 RCT-49	0.53824827
Sarcoplasmic reticulum calcium ATPase	0.8204625
Alpha-2-macroglobulin, sequence 2	1.429218
Phase-1 RCT-204	1.3370055
Vascular endothelial growth factor	1.184116
NADP-dependent isocitrate dehydrogenase, cytosolic	0.39178082
DNA binding protein inhibitor ID2	0.41138356
Glutathione S-transferase Yc	0.71286144
Epoxide hydrolase	0.4791742
Insulin-like growth factor I	1.0321839
Prostaglandin H synthase	1.1223301
Phase-1 RCT-136	0.5800501
Phase-1 RCT-137	1.2853257
Phase-1 RCT-138	1.0430855
Hepatic lipase	0.89394786
Phase-1 RCT-164	0.6547884
Acyl-CoA dehydrogenase, medium chain	0.8646032
Glutathione S-transferase Yc2 subunit	0.6576478
Carbamyl reductase	0.93670774
Phase-1 RCT-166	0.9404447
Acylglutathione E	0.76839084
UDP-glucuronosyltransferase	1.1827715
Glutathione S-transferase P1	0.6474369
Disulfide isomerase related protein (ERp72)	1.3454714
Ribosomal protein L13	1.0555359
Ceruloplasmin	3.4816764
Intra-alpha-inhibitor H4 heavy chain (Ith4)	2.1815777

Table 28

Phase-1 RCT-3	1.2275816
Fetuin beta (Fetuo)	1.0868189
3-hydroxybutyrate dehydrogenase	0.62667665
Carbonic anhydrase III, sequence 2	1.1371633
Phase-1 RCT-10	0.58666333
Alpha-2-microglobulin	0.97446007
Dynamin-1 (D100)	0.9764712
Lysyl oxidase	1.0103565
Phase-1 RCT-252	0.5656986
Phase-1 RCT-28	1.362882
Phase-1 RCT-278	1.5141633
Phase-1 RCT-42	0.8223953
Phase-1 RCT-25	0.9411478
Cytochrome P450 2C11	5.632043
Phase-1 RCT-202	0.899867
Complement factor I (CFI)	1.1942462
Proliferating cell nuclear antigen gene	1.4535215
Activating transcription factor 3	0.74316667
Focal adhesion kinase (pp125FAK)	1.7232553
Phase-1 RCT-289	0.8659847
Phase-1 RCT-259	3.9417295
Iron-responsive element-binding protein	0.5653983
MHC class I antigen RT1A1(n) alpha-chain	2.450555
AVI sulfotransferase	1.105186
Phase-1 RCT-171	1.0957932
Phase-1 RCT-43	0.784247
Phase-1 RCT-270	0.39047826
Colony-stimulating factor-1	1.1140326
IL-cardiakin	1.0602765
Phase-1 RCT-42	0.62503555
Phase-1 RCT-22	0.6469559
AT-3	1.2718793
Phase-1 RCT-18	0.86881813
Phase-1 RCT-123	1.0578809
Phase-1 RCT-56	1.1086546
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.59748036
Glucose transporter 2	0.4255876
Multidrug resistant protein-2	1.0085322
Multidrug resistant protein-1	1.2634549
Phosphatidylethanolamine-binding protein	1.372212
Phase-1 RCT-180	1.0462857
Integrin beta-4	1.1212734
NAADPH cytochrome P450 oxidoreductase	0.8894487
Wt4f1	1.0160923
Endogenous retroviral sequence, 5' and 3' LTR	1.6950898
Phase-1 RCT-53	0.7273761
Phase-1 RCT-54	1.2131859
Phase-1 RCT-240	0.40280625
Osteopontin	1.0155452
Organic anion transporting polypeptide 1	0.50004977
Phase-1 RCT-241	2.7665603
Tissue factor pathway inhibitor	2.7338066
Cyclin-dependent kinase 4 inhibitor P27kip1 (alternale clone)	0.92134655
Phosphodiesterase D	1.2334256
Phase-1 RCT-39	1.8718308
Phase-1 RCT-268	0.7501078
Phase-1 RCT-113	1.396177
Adenine nucleotide translocase 1	0.372765
Alpha-1 acid glycoprotein	35.53968
MHC class II antigen RT1B-1 beta-chain	0.33211276

Table 28

Organic cation transporter 3	1.4637811
Hyposulfite factor 1 alpha	0.79341966
Phase-1 RCT-43	0.5404529
Phase-1 RCT-45	0.3718522
Malate dehydrogenase, cytosolic	0.8418461
VI-30 element	2.8028948
Phase-1 RCT-189	0.876535
Alpha-fetoprotein	1.4461476
Calgranulin B	1.0198445
Tissue plasminogen activator	1.054803
Phase-1 RCT-195	0.77532244
Liver fatty acid binding protein	1.1297392
Alpha-1 microglobulin/bikunin precursor (Amp)	1.0646615
Phase-1 RCT-294	0.83205767
Phase-1 RCT-151	1.3944428
Phase-1 RCT-155	1.1480112
Phase-1 RCT-221	0.9822098
Phase-1 RCT-235	1.0942787
Organic anion transporter 3	0.6148447
Matrix metalloproteinase-1	1.3299477
Urinary protein 2 precursor	0.98741325
Phase-1 RCT-212	1.0400214
(1) Gene expression data for 6 hour timepoint are presented as mean ratio of treatment/control for all 6 hour predictive genes (Table 18).	
(2) Compound and dose abbreviations as in Table 1.	
(3) Individual animal number	
(4) Liver inflammation classification for compound-dose group at 72 h: yes=neor, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed	
(5) Predictive gene (as in Table 18 and as included in Table 25)	

Table 28

Table 29. Expression Data for 24 Hour													
Timepoint (1)	ANIT 15	ANIT 15	ANIT 15	5-FU 13	5-FU 13	5-FU 13	5-FU 13	5-FU 50	5-FU 50	5-FU 50	5-FU 50	APAP 250	APAP 250
Compound-Dose (2)	1044	1045	1046	no	no	no	no	no	no	no	no	no	no
Animal Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	1.234655	0.89763516	1.0834413	0.86298654	0.9185269	1.3651268	1.1415535	1.0492692	0.8976617	0.8976617	0.8976617	0.8976617	0.8976617
Gamma-actin, cytoplasmic	1.1349468	0.89194306	1.0710337	1.0739003	0.9911743	0.92691845	1.2817578	1.1361277	1.2817578	1.2817578	1.2817578	1.2817578	1.2817578
Phase-1 RCT-145	0.9991312	0.8330532	0.76375794	1.2129412	1.2428364	1.6599728	0.9869035	1.31720591	0.9869035	0.9869035	0.9869035	0.9869035	0.9869035
Gadd45	0.96064323	1.0556684	1.06986	1.0317032	1.0608842	1.1426469	0.89444646	0.89444646	0.89444646	0.89444646	0.89444646	0.89444646	0.89444646
Phase-1 RCT-78	1.269109	1.0790027	1.0589168	0.9947478	0.9796271	1.0687534	1.2731256	1.208655	1.012806	1.012806	1.012806	1.012806	1.012806
Fas antigen	1.0204061	1.2325006	0.9874173	1.1621082	1.1777798	1.6081469	1.0507571	1.3891182	1.4228144	1.4228144	1.4228144	1.4228144	1.4228144
Macrophage inflammatory protein-2 alpha	0.9659787	0.88379914	0.8777278	1.1494988	1.0974748	1.2803507	0.9892273	1.2803507	1.2803507	1.2803507	1.2803507	1.2803507	1.2803507
Interleukin beta1	1.23396	1.2213591	1.0871301	1.0950805	1.020762	0.972094	0.8437409	1.9543331	2.3668187	2.3668187	2.3668187	2.3668187	2.3668187
Aspartate aminotransferase, mitochondrial	1.0534517	0.9193872	1.0605085	0.7452737	0.86965023	2.7616761	0.8010431	1.2331627	0.8010431	0.8010431	0.8010431	0.8010431	0.8010431
Caselin-alpha	0.9686857	1.0265313	1.0674243	1.3407464	1.311171	1.4703288	1.077911	1.473478	1.473478	1.473478	1.473478	1.473478	1.473478
Malic enzyme	0.94202816	0.685453	1.5089592	1.2900716	1.1457593	2.2280629	1.0160489	1.224968	1.0916853	1.0916853	1.0916853	1.0916853	1.0916853
Phase-1 RCT-30	0.97342217	1.0616713	1.0331055	1.3821774	1.2949441	1.6557193	1.0872158	1.231627	0.80534127	0.80534127	0.80534127	0.80534127	0.80534127
Hepatocyte growth factor receptor	1.3389288	1.833954	1.1249412	0.8540512	0.86649034	1.0648104	0.85718745	1.0985358	0.80534127	0.80534127	0.80534127	0.80534127	0.80534127
Phase-1 RCT-27	1.0924227	1.0124472	1.0826418	0.874013	0.8374462	0.714733	0.6710568	0.62349147	0.5567853	0.5567853	0.5567853	0.5567853	0.5567853
Sodium/glucose cotransporter 1	0.51595306	0.6032684	0.6324032	0.6784013	0.6374462	0.59401214	0.7613031	0.5727653	0.62349147	0.62349147	0.62349147	0.62349147	0.62349147
MAP kinase kinase	1.5090299	2.6885998	0.47315645	1.3123728	1.1956394	1.5409699	1.1319916	1.1666703	0.875704	0.875704	0.875704	0.875704	0.875704
Phase-1 RCT-50	1.0811491	1.1751633	1.1560528	0.8722476	0.8292279	0.7716829	0.9216094	0.8232578	0.82015973	0.82015973	0.82015973	0.82015973	0.82015973
Phase-1 RCT-288	1.1132158	0.92859047	0.8992047	0.8722476	0.7687462	0.7408214	0.92125154	0.74812967	0.8541688	0.8541688	0.8541688	0.8541688	0.8541688
Phase-1 RCT-37	0.8961507	0.9242937	0.7317085	0.8048825	0.7687462	0.7408214	0.92125154	0.74812967	0.8541688	0.8541688	0.8541688	0.8541688	0.8541688
Organic cation transporter 3	0.98720084	0.9149463	0.9808984	1.197376	0.857618	1.0166827	1.0596878	0.8730169	0.8056796	0.8056796	0.8056796	0.8056796	0.8056796
60S ribosomal protein L6	0.98022713	0.815434	0.9447662	0.7740368	0.7103866	0.7249129	0.8687549	0.8730169	0.8056796	0.8056796	0.8056796	0.8056796	0.8056796
Zinc finger protein	1.1231229	1.183528	1.0076511	1.2828006	0.96754364	1.0132923	1.174366	0.7540571	1.1371926	1.1371926	1.1371926	1.1371926	1.1371926
Calgranulin B2	0.8940242	0.8936915	0.9042774	0.929973	0.8400796	1.0895544	0.86228047	1.155073	1.0224754	1.0224754	1.0224754	1.0224754	1.0224754
ID-1	1.2034271	1.4213678	1.3580462	0.929315245	0.864412	0.86243924	0.8727324	0.7225366	0.830095	0.830095	0.830095	0.830095	0.830095
Phase-1 RCT-92	0.75784415	0.7388149	0.8428166	0.8241782	0.8533867	1.8087253	1.3189983	1.4116362	1.2657182	1.2657182	1.2657182	1.2657182	1.2657182
Phase-1 RCT-115	1.2406229	1.2578516	1.1813779	1.4177482	1.3533867	0.8797073	1.0522065	1.06837	1.2039248	1.2039248	1.2039248	1.2039248	1.2039248
Mutl. homologue (MLH1)	0.97443837	1.104952	0.8650024	0.8278782	1.009787	0.8797073	1.0419033	1.2675248	1.1186501	1.1186501	1.1186501	1.1186501	1.1186501
Phase-1 RCT-78	0.9261704	1.1285172	1.1205413	1.3595458	1.1069009	0.9161042	1.1046076	1.368735	1.073142	1.073142	1.073142	1.073142	1.073142
Sorbitol dehydrogenase	1.6045961	1.4889408	1.4781866	1.0771313	0.95911485	0.9205388	1.175627	1.084668	1.0702575	1.0702575	1.0702575	1.0702575	1.0702575
Phase-1 RCT-24	1.1957718	1.0805016	1.2451801	1.1663348	1.31524	1.0597475	1.2470442	1.2494008	1.2049413	1.2049413	1.2049413	1.2049413	1.2049413
Calgranulin B1	1.0716254	1.052263	1.1184009	1.0959773	1.2425723	1.190517	1.2067721	1.2066881	1.0149658	1.0149658	1.0149658	1.0149658	1.0149658
Elongation factor-1 alpha	0.7427184	0.8833508	0.8544673	0.77340784	0.787115	0.84501476	0.7887863	0.7970261	0.8564949	0.8564949	0.8564949	0.8564949	0.8564949
L-glutono-gamma-lactone oxidase	1.035268	0.88223166	1.2306848	0.8881217	1.3411688	1.0456558	1.2213012	1.1252539	0.8716736	0.8716736	0.8716736	0.8716736	0.8716736
Phase-1 RCT-33	1.0367855	0.81639037	1.1262873	0.79445163	0.9035608	0.9077859	0.83877647	0.8504484	0.8223167	0.8223167	0.8223167	0.8223167	0.8223167
G-jun	1.1744986	1.4761358	1.1978484	1.6867871	2.1156347	1.9463342	1.3228419	1.8350563	0.978265	0.978265	0.978265	0.978265	0.978265
Phase-1 RCT-233	1.0828756	0.9383539	1.077182	0.98443335	1.113472	1.0854328	0.8942561	0.9459609	0.86348763	0.86348763	0.86348763	0.86348763	0.86348763
Phase-1 RCT-38	1.0861074	1.926715	1.0917805	1.3877577	1.1097107	1.1097107	1.4220744	1.1480987	1.2405444	1.2405444	1.2405444	1.2405444	1.2405444
Phase-1 RCT-242	1.1259185	1.0983542	1.0375159	0.9117145	1.3550928	0.8666887	0.8872145	1.0954368	1.0280274	1.0280274	1.0280274	1.0280274	1.0280274
Phase-1 RCT-181	0.7240858	0.7483657	0.839102	0.9447974	0.7118444	0.89461327	0.8039889	0.6675405	0.8435878	0.8435878	0.8435878	0.8435878	0.8435878
Phase-1 RCT-185	0.9294973	0.87913543	0.8690357	0.84079425	0.8114437	0.7780451	1.011154	0.831643	0.91087025	0.91087025	0.91087025	0.91087025	0.91087025
Phase-1 RCT-179	1.0041298	1.0178332	1.0406681	1.0298455	1.0688541	1.0810028	1.0543267	1.1215898	0.9828544	0.9828544	0.9828544	0.9828544	0.9828544
Phase-1 RCT-144	0.8691682	0.82598716	1.1694446	0.80623953	0.8794727	0.82248455	0.8824672	0.8824672	0.8824672	0.8824672	0.8824672	0.8824672	0.8824672
IRB-a	1.5419785	1.5970343	1.085522	1.2804985	1.3645488	1.5460782	1.1515332	1.4904083	1.8018307	1.8018307	1.8018307	1.8018307	1.8018307
Phase-1 RCT-225	0.8706381	0.7853882	0.9022265	0.766707	0.760682	0.80278474	1.0141122	0.7890627	0.8916913	0.8916913	0.8916913	0.8916913	0.8916913
60S ribosomal protein L6 (alternated clone 1)	1.345743	0.85662943	1.117432	0.986182	1.4076198	1.6829709	1.3852527	1.2803719	1.5404369	1.5404369	1.5404369	1.5404369	1.5404369
Beta-tubulin, class I	0.8078203	1.3479131	0.71125643	0.90337217	0.93819914	1.0345547	1.6298143	1.9177527	1.0098183	1.0098183	1.0098183	1.0098183	1.0098183
Multidrug resistant protein-2													

Table 29

Phase-1 RCT-49	0.9144408	0.9821536	1.0273243	1.0697739	1.1442828	1.0990219	1.0887235	1.0197467	1.0847362	0.9791628	0.88589704
Calgranulin B3	1.1572421	1.0405397	1.0764239	1.2014594	0.9347457	0.8919286	1.1561865	1.1243172	1.0841323	1.0840886	0.8192186
NADP-dependent isocitrate dehydrogenase, cytosolic	0.9461686	0.90989603	0.90336144	0.7769579	0.7674657	0.7661056	0.80742747	0.65310066	0.71696216	0.8255751	0.80267307
Oxalacetate binding protein 1	0.8172436	0.92038655	0.8733505	1.2070948	1.0614291	1.5820359	0.9494123	1.1777046	0.9329373	1.023454	1.0074737
Sodium/voltage dependent anion transporter	0.8770603	0.8037157	0.8536247	0.7723283	0.73622814	0.671170465	0.6441643	0.6426185	0.7071108	0.5944278	1.0677975
Phase-1 RCT-174	0.9598845	0.8398725	1.0769125	1.1902688	1.1802688	1.1467818	0.9165781	1.1	0.9838087	0.9686574	0.7244774
Phase-1 RCT-77	0.8570215	0.9204426	0.9218703	0.9254482	0.7166043	0.89953133	0.7698199	0.69412598	0.8494135	0.9268192	0.74669534
Inositol polyphosphate multikinase (ipmk4)	0.87777497	0.680148	0.73252434	0.7534267	0.7854723	0.96706104	0.8748348	0.8775678	0.7676091	0.874850893	0.87469484
Phase-1 RCT-256	0.8258594	0.756739	0.9494309	0.9216274	1.121024	1.0076169	1.1053487	0.8199891	1.0094044	1.076522	1.0561546
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	0.8776653	0.8876054	0.76603365	0.8887283	0.7155098	0.8258019	0.80624725	0.82457525	0.6847123	0.87856525	1.0180075
CDK102	0.9417614	0.91255803	0.9670025	0.96348826	0.98694115	1.1245929	0.91689503	1.0394915	0.9491674	0.9276214	0.8579424
Phase-1 RCT-209	1.0279475	1.0639291	0.89988275	1.1268612	0.98090017	1.0506748	0.9162064	0.8464680	0.9200227	0.9276592	0.8749207
NADH-cytochrome b5 reductase	1.1483488	1.0598592	1.040206	0.8604593	0.78812057	0.9237816	0.63205858	0.8052908	0.7970038	0.9940926	1.1403513
Dynamin-1 (D100)	0.7341891	0.81723255	0.8457148	1.0895996	1.0328438	1.0394361	0.95772314	0.9478024	1.0657479	1.0713295	0.99276567
Serine/threonine protein kinase-30	0.8908734	0.761073	0.83395418	0.7876478	0.8078276	0.92619824	0.81392763	0.70924735	0.7394215	0.7951443	0.8592868
Phase-1 RCT-49	0.87097087	0.92505884	0.9841884	0.887008	1.0033953	0.85216536	1.0870309	0.9204272	1.0734688	0.8725134	0.99255943
Camitline palmityl-CoA transferase	1.558981	1.495559	1.3855755	1.2183528	0.97316194	0.85989874	1.0125916	1.1495741	1.022337	1.0695221	1.1046824
Alpha-2-microglobulin	0.9287466	0.8014	0.71943134	1.007066	0.55873	0.7251498	0.82999043	0.74194648	1.1331223	1.0085552	0.5680697
Apolipoprotein CII	0.8928475	0.875975	0.93075284	1.087775	0.6908777	0.8739698	0.8736687	0.77284093	0.86128008	0.819185	0.8429518
Calreticulin L sequence 2	0.8757198	1.0427825	0.70154217	0.7277387	0.92515835	0.7494274	0.82708885	0.83208284	0.8365451	0.8534869	0.8992265
Phase-1 RCT-141	1.1970402	0.92886065	0.8408571	1.0166576	0.6040084	0.57757684	0.75373385	0.6976599	0.8989294	1.1073164	0.88824165
Phase-1 RCT-289	1.160775	1.0622267	1.1212038	1.206356	1.168918	1.2466874	1.2949888	0.8343015	0.9846902	0.88544855	0.90417534
Endothelin-1	1.1317997	1.1354519	1.148341	1.1782807	1.2271682	1.430877	1.184217	1.5516268	1.4121863	1.0774042	0.9297689
Phase-1 RCT-140	1.1096820	1.058176	0.707338	1.0745317	0.9607772	0.97678416	1.0255075	1.0664383	1.0104868	1.0577534	1.1784245
Cyclin D1	0.8332938	0.81300678	0.9084327	0.8296823	1.6898232	0.8930439	0.8358435	0.8995169	1.0813783	1.1357894	1.1429415
Phase-1 RCT-287	0.973105	0.9785731	0.9140749	0.8435933	0.83820634	0.77135247	0.9250639	0.8333955	1.3822327	0.5053428	0.6734522
Phase-1 RCT-281	0.8378438	0.9524888	1.0820577	0.80257404	0.885737	0.7888103	0.8662419	0.72188956	0.89464605	0.9082662	0.6808021
Retinol-binding protein (RBP)	0.7857489	0.9016016	0.8532308	0.7628275	0.5054723	0.5911314	0.74854535	0.9393984	1.0162517	0.9833062	0.86192254
ATP-stimulated glucocorticoid-receptor translocation promoter (GyA)	0.7606202	0.87878885	0.68686885	0.68632554	0.8177568	0.763943	0.980634	0.8545556	0.9719116	0.7536892	0.8428339
Phase-1 RCT-60	1.1408002	1.0694015	1.181528	1.0377604	1.0205468	1.0004708	0.99199835	0.9588418	0.96880823	1.041147	0.9957097
Pyruvate kinase, muscle	0.7598414	0.9789988	0.8118107	1.038686	1.3005311	1.2687137	1.1698873	1.2623621	1.049605	1.2455558	1.1347631
PAR interacting protein	1.0212445	1.0472688	1.088152	1.0739652	1.0728178	0.9728491	1.1765709	1.0820519	1.1654148	0.97882134	0.999228
Nucleoside diphosphate kinase beta isoform	1.1012578	0.96142485	1.2050774	0.8638704	0.7603818	0.97203326	0.79922533	0.86385155	1.0197171	1.2296636	0.88940886
Gadd153	1.0656637	1.0818016	1.1014409	1.3004087	1.1418839	1.2355988	1.1323394	1.3915831	1.2783103	1.2222211	1.0213858
Phase-1 RCT-82	0.8388347	1.01372	0.7705894	0.75392856	0.85816467	0.7616749	1.1499928	1.1458775	0.98285808	1.1296431	1.1723659
Alpha 1 - inhibitor III	1.2052535	1.0465447	1.132804	0.9631354	1.1069282	0.97812594	1.3339578	1.1895431	1.2420834	1.0740927	0.9608217
N-hydroxy-2-acetylaminofluorene sulfotransferase (STY1C1)	0.74152835	0.75263107	0.6513983	0.79007695	0.59532344	0.70286286	0.63820595	0.59312034	0.59261674	0.780278	0.93681484
Phase-1 RCT-182	1.116288	1.053268	1.1032131	0.78168245	0.86951478	0.95001805	0.7580976	0.6392579	0.86724942	0.7485575	0.98289655
Aldehyde dehydrogenase, microsomal	0.6311194	0.5502825	0.8670506	0.62807304	0.567337	0.7400826	0.8073888	0.5940054	0.8364187	0.43913028	0.89282847
Sterol carrier protein 2	0.839786	0.7313282	0.8311451	0.7268592	0.746314	0.854628	0.85189235	0.87692514	0.7622097	0.9517428	0.8344413
Organic anion transporter 3	0.74572876	0.9852116	0.7191772	1.0418878	0.9527009	1.3286465	0.71043943	1.3038136	1.1778889	1.2156521	1.1630347
Calgranulin B4	1.1671887	0.96385194	1.1359466	0.93854398	0.86723044	1	1.1081185	0.84632903	0.84660183	1.081729	1.2471673
Phase-1 RCT-182	0.8725214	0.9559407	0.9688731	0.9838918	0.7504907	0.68780254	0.7458429	0.88203805	0.9856007	0.9856007	0.7316576
Calgranulin B8	0.73598835	1.015346	0.9688731	0.9838918	0.7504907	0.68780254	0.7458429	0.88203805	0.9856007	0.9856007	0.7316576
Aldehyde dehydrogenase, mitochondrial	1.834677	1.1346823	1.2817447	0.8813519	0.8138288	0.914008	0.8325892	0.8102031	0.9325883	0.84124637	0.771692
Phase-1 RCT-128	0.64305305	0.7403402	0.8437627	0.8437627	0.73218185	0.8534293	0.89893454	0.8975687	1.0775381	0.87626554	0.762918
Phase-1 RCT-102	0.8053058	0.75500985	0.89117048	1.1951389	1.0709381	1.5983763	1.5027566	0.8443857	1.075381	0.67626554	0.9381317
Preproalbumin, sequence 2	0.63399554	0.76154457	0.5887943	0.80359167	0.6509865	0.7016493	0.8278401	0.8445105	0.7668994	0.6698308	0.71387528
Apolipoprotein AII	1.3045308	1.400468	1.240948	0.7773237	0.9490607	1.0148083	0.7463741	0.86027454	0.7690413	1.1987898	0.9185287
Phase-1 RCT-10	0.7821733	1.0007598	0.78612375	0.91552407	0.8772284	0.7463332	0.8535512	0.67085	0.82172054	1.0683661	1.0082602
Phase-1 RCT-46	1.0922433	1.0387018	1.2802345	1.3848323	1.4315051	1.4850004	1.4895482	0.90419887	1.0702826	1.358267	1.1895674
Phase-1 RCT-8	0.7469273	0.7897985	0.81646885	0.7655124	0.6615886	0.71135217	0.9584754	0.62764875	0.8105258	0.7372578	0.8237222

Table 28

Phase-1 RCT-168	0.9633163	1.0580566	1.3160982	0.8709101	0.9424203	1.0057173	0.88576746	0.8356137	0.7324105	0.808246	0.8856127	0.7707384
Phase-1 RCT-168	0.8410778	0.8997835	0.7897615	1.0629405	0.8164393	1.0688851	0.86202115	0.77139246	0.95186706	0.8026439	0.8573817	0.8373817
Beta-alarinate synthase	1.1550226	0.7696540	0.7291889	1.0231889	1.3381084	0.87869786	1.6918533	1.0200303	0.5018006	1.0281662	0.8368612	0.8368612
Phase-1 RCT-206	0.8661627	0.7405203	0.7282154	0.6461661	0.8784101	0.8266334	0.6304385	0.51189524	0.718744	0.9032842	0.7253511	0.7253511
Carbonic anhydrase III	0.8394085	0.6661759	0.73521274	0.9720505	0.48813593	0.41710707	0.6949898	0.83271134	0.930281	0.8307031	1.0554177	0.59850454
Phase-1 RCT-281	0.79555684	0.8378552	0.88711513	0.9241876	0.89898994	0.8540948	0.80080816	0.80651285	0.77719104	1.0751426	1.034983	1.0876849
Carbonic anhydrase III, sequence 2	0.619174	0.74442303	0.6058919	0.8441896	0.837728	0.75029534	0.73197657	0.8058338	0.53278214	0.8351039	0.8339013	0.8339013
Phase-1 RCT-271	1.0047202	0.8360211	1.155231	0.95941008	0.72957715	1.1351621	0.84782504	0.7869024	0.8014087	0.8345232	1.0360798	0.8981077
HMC-CoA synthase, mitochondrial	1.2631849	1.2967628	1.1698539	0.8571288	1.1286087	0.6590446	1.1088721	0.8395873	1.1443336	1.3148078	1.4295839	1.3290648
Phase-1 RCT-189	0.957172	0.8813326	1.0627827	0.8631359	0.8504893	1.0071	1.4807939	1.0351878	1.186117	0.9110143	0.8296072	0.7520858
Phase-1 RCT-40	0.8138789	0.7869445	0.7812124	0.8024294	0.6707124	0.71537636	0.68653324	0.55841313	0.75943285	0.8548482	0.8847627	0.7283569
Urinase protein 2 precursor	0.80248195	0.6290388	0.66117865	0.7644631	0.6840281	0.690207	0.712779	0.6538324	0.8293529	0.6792845	0.8941613	0.50842285
Paraoxonase 1	0.6920378	0.7283938	0.6523894	0.65409714	0.68656524	0.7230977	0.712779	0.6538324	0.8293529	0.6792845	0.8941613	0.50842285
Phase-1 RCT-168	0.8728945	0.750337	0.8701555	0.608059	1.129586	0.8464248	0.821429	0.6938306	0.74679414	0.9855386	0.6334758	0.6334758
Presenilin-1	0.7788818	0.59757988	0.7081309	0.89880246	0.59854707	0.7427059	0.8622194	0.6823768	0.7884889	0.33704038	0.8545338	0.54974093
Phase-1 RCT-38	0.8092122	0.7337164	0.9244515	0.9042202	1.060489	1.0620658	1.1336897	0.8666376	1.0207416	1.1934133	1.0345111	1.0345111
Phase-1 RCT-270	0.6942322	0.7076541	0.80383533	0.9905985	0.87861138	0.65904224	0.97276535	0.84338025	0.8071513	0.95243084	0.87105894	0.85987404
Transferrin	0.5051308	0.59402487	0.5908397	0.72530854	0.6873977	0.84417255	0.8205499	0.6872853	0.6551925	0.6613085	0.7890704	0.67489845
Hepatic lipase	0.9425939	0.6856035	1.6810078	0.508204	0.723527	0.8124957	0.8973803	0.5809898	0.6124975	0.8202561	0.82671416	0.8653741
Cytochrome P450 11A1	0.8398606	0.9095833	0.6932869	1.1280853	1.022774	1.299646	0.9658779	1.210062	1.0235765	0.7251177	1.0846177	0.7975737
Phase-1 RCT-175	0.911961	0.9713865	0.7827848	0.8592288	0.8247828	0.8211879	0.7873594	0.76871517	0.80627077	0.90379137	1.0189899	0.76375384
Phase-1 RCT-117	1.647296	0.8430245	0.78524185	1.1680948	1.2766598	1.134663	1.5469552	1.1515244	0.83173796	0.5392493	0.984665	0.907024
Phase-1 RCT-137	0.8303145	0.6740775	0.8281687	0.80377871	0.7698091	0.7708092	0.81290796	0.76663244	0.9301438	0.7138007	0.7273785	0.6069705
Melanoma-associated antigen ME491	1.0375171	1.1314773	0.8611728	0.92388	0.8712776	0.7646828	1.0275931	0.8731291	0.9015104	0.8180655	0.9607827	0.8658814
Phase-1 RCT-12	1.0551718	1.036269	1.1403162	1.0201974	1.3652276	1.084789	1.1844039	1.1540084	1.256103	1.191887	1.1572877	0.89454657
Phase-1 RCT-162	0.9307998	0.7658373	0.8528723	0.7880634	0.71532017	0.8203859	0.9404895	0.8495503	0.9490785	0.7635439	0.8892117	0.7232087
14-3-3 zeta	1.2469954	1.3013403	1.2184939	0.8959373	0.8739658	0.9816141	1.0652963	1.1281042	1.1210471	1.165957	1.2755212	1.0667768
Cytochrome P450 2C23	0.6786962	0.9534382	0.84099205	0.7774793	0.83076904	0.98841891	0.98841891	0.50156045	0.7325902	0.7203462	0.81640537	0.8881704
Voltage-dependent anion channel 2 (Vdac2)	0.9571766	0.8118678	1.0084142	0.8823158	0.9203633	0.9203633	1.1216207	1.0268902	1.1734005	1.2867525	1.0648984	1.0648984
Phase-1 RCT-164	1.1245887	0.9558731	1.0509348	1.0176849	1.013118	0.99687624	2.580363	2.2507923	2.525689	0.9533191	1.0331409	0.97810316
Superoxide dismutase Mn	1.324732	1.144354	0.88402316	0.89452316	0.9185952	0.88472508	1.0782919	1.0041832	1.0247448	1.1370399	1.1984532	1.02008
c-myc	1.2556384	0.8573229	0.7223514	1.5037686	1.3402379	1.3130077	1.648532	1.5558338	1.1510816	1.269491	1.0737239	1.2187063
Phase-1 RCT-188	1.2529483	1.1683028	1.0703132	1.1398027	0.9723938	0.9510534	1.1595604	1.0402103	1.085215	0.9482821	0.9285483	0.8585225
Cyclin G	1.2350241	1.2108237	1.3521165	1.4034598	1.0933255	1.55383	2.3834968	1.87699	3.7271881	1.0696669	1.0566213	1.099879
Calgranulin B5	0.87845666	1.0351458	1.0558656	1.1635747	0.8927957	1.205188	1.0774025	1.1625598	1.1411173	1.1560182	1.1688478	1.1764315
p53	1.052024	1.0942703	1.0409782	1.0380415	0.8094677	0.9748472	1.121331	1.2351357	1.1178073	0.9108433	0.8760809	1.0271506
Phase-1 RCT-205	1.0568888	1.1280379	1.2269703	1.254572	1.3340502	1.1391122	1.0193865	0.97214846	1.1119434	0.8788992	0.9332462	0.9377763
Phase-1 RCT-68	1.082211	1.0222168	1.0484298	1.0217175	0.98392847	1.0393579	1.164398	0.8980645	0.9702852	1.2560904	1.3145884	1.1844878
Caspase 3	1.0344441	1.0907816	0.90061796	1.254828	1.1482310	1.1813805	1.0513469	1.8147318	1.2510104	1.2263354	1.3819171	1.3303808
Alpha-tubulin	1.2883369	0.9653587	1.3188455	1.052247	1.0081174	1.0321853	1.0056692	1.1253798	1.0718098	0.9331761	0.97362914	1.1213952
Ribosomal protein L13A	0.9291038	0.8786943	0.9376202	0.7629735	0.8454066	0.7374124	1.0712136	0.9976998	0.803388	1.3120813	1.2298342	1.1284482
IgE binding protein	0.91219157	0.8033094	0.83788115	1.0531306	1.224349	1.3156988	1.0154625	1.0802361	1.0828445	1.0943258	1.066537	1.0439243
Phase-1 RCT-39	0.8256676	0.973714	0.9036931	0.8808855	1.0840786	1.2670538	0.9811697	1.1583188	1.103778	1.1706781	1.0454218	0.85088385
Cofilin	1.0454841	0.86250816	1.0086012	0.8766813	0.8280717	0.9322122	0.782426	0.835503	0.94339854	0.85271233	0.830898	0.91321387
Heme oxygenase	0.8599554	0.81074923	0.7697256	1.0312041	1.0437711	1.4447311	1.077467	0.9739002	0.8185898	1.1482412	1.2556807	0.9318275
Phase-1 RCT-241	1.2400463	1.24143434	1.2229478	1.1740458	1.0946578	0.9438349	1.0631747	1.118122	0.98058524	1.0045639	0.9200067	1.153423
Ribosomal protein S9	0.98796286	0.7876066	1.0765914	0.7437902	0.695443	0.75590146	0.7701294	0.65708905	0.77275145	1.0753275	0.8525019	0.9957287
Phase-1 RCT-258	1.0452662	1.0501314	0.8929971	1.0678198	0.8378824	0.8538871	1.1425503	0.9913303	1.0752094	1.0360308	0.8895516	1.0010142
Arabinosuccinate lyase	1.025302	1.2026094	1.0731585	0.8724884	1.0322863	0.7849556	1.1032863	0.80426194	1.0600874	1.1295489	1.135157	0.86693156
Phase-1 RCT-180	1.3548789	1.0270557	1.3431201	0.87028943	1.0285927	0.8921876	1.062046	1.135234	0.8948993	1.0824504	1.087474	1.0474179
Multidrug resistant protein-1	0.8338811	1.127753	0.7923598	0.88922524	1.011268	0.8697438	1.286428	1.062046	1.135234	0.8948993	1.0824504	1.087474
Ornithine decarboxylase	1.6940781	1.127753	1.598424	1.315074	1.0169186	1.0698697	1.1511778	1.428934	1.3840773	1.9487185	1.8489518	1.7158789
Thymosin beta-10	0.9876697	0.86301243	0.9579362	0.8805448	0.83986403	1.0476573	1.0547783	0.90789844	1.0283252	0.9723438	1.0575863	1.0575863
Phase-1 RCT-72	0.94780011	0.89276537	1.0133151	1.202419	1.0749412	1.5916219	1.0749412	1.3980848	1.0483258	1.1065431	1.1870025	1.0982953
Phase-1 RCT-109	0.9298786	0.8429688	1.0163127	0.7668204	0.83337446	0.7531865	1.0670506	0.93743914	0.8458841	1.1642103	1.2189075	1.030518
Phase-1 RCT-76	0.9742061	0.98414826	1.129754	0.7734622	0.9072126	0.8339414	1.0735444	1.0654478	0.89223876	1.1784301	0.878372	0.85533854
Vacuole membrane protein 1	0.8552269	0.8792168	0.93290854	0.809522	0.7116318	0.80018735	0.81278804	0.7311044	0.85864586	0.7116075	0.76502205	0.5802388

Table 20

Phase-1 RCT-158	1.1376593	1.1408688	1.0376422	1.2717211	1.0704782	1.193718	1.0613844	1.2350298	1.2148458	1.129102	1.0617951	1.2428529
Phase-1 RCT-113	1.2044135	1.1899887	1.08335	0.8808846	0.87537503	0.822413	0.8948914	1.1273192	1.1198587	0.90921338	1.1315854	1.1315854
Endogenous retroviral sequence, 5' and 3' LTR	0.90260875	1.1204435	0.9442034	0.92982394	0.87217214	0.8393259	0.89506456	0.9160741	1.2891484	1.5941322	1.2960659	0.95238554
Beta-actin	1.1125833	1.0069311	1.080633	0.64210916	0.7735134	1.0292419	1.0695548	0.96721196	0.916535	3.0672295	2.4768662	2.7791603
Phase-1 RCT-65	1.1814723	1.3648184	1.0991114	1.1430958	1.4769107	1.6424018	1.2501326	1.378758	1.3046962	1.5337906	1.5226179	1.3918132
MHC class I antigen RT1A1(1) alpha-chain	1.8905007	1.8041407	1.5426527	1.4040811	1.8920783	1.944825	1.619809	1.5000522	1.6659971	1.4504156	1.4433015	1.2989323
Bax (alpha)	1.2416624	1.1744834	1.2701218	1.2928551	1.418592	0.908128	1.8201531	1.8742516	2.4587035	1.295488	1.1407483	1.307053
Carnoy1 reductase	1.1863963	1.2043815	1.2609972	1.4120785	1.0944185	1.1135831	1.0254887	1.471894	1.1156356	1.120373	0.97379875	1.2524985
Beta-actin, sequence 2	1.0014653	0.97430295	0.9769427	0.8745844	0.926052	1.1551862	1.2245715	1.1224312	1.066517	1.1413021	1.0439515	0.8896563
Interleukin-10	1.1216725	1.254464	1.3284883	1.1384859	1.1012089	0.8717898	1.1388346	0.9875454	1.2667561	1.1464108	0.9852316	1.1684549
Phase-1 RCT-191	1.589339	1.4355308	1.5240867	1.0897073	1.4454972	0.7717898	1.1388346	0.9875454	1.2667561	1.1464108	0.9852316	1.1684549
Phase-1 RCT-111	0.7922171	0.85418006	1.0452079	0.7785297	0.9978218	0.83933584	1.0599357	1.0135723	1.0650833	1.1545427	0.8922022	0.8688597
Apoptosis-regulating basic protein	0.7759487	0.780832	0.81873508	0.7204684	0.8217704	0.6724461	0.777307	0.8490623	0.73910743	0.77465347	0.9720474	0.55588776
Glutathione peroxidase	0.6769063	0.65703404	0.785112	0.9431503	1.163982	0.7008514	1.1611571	0.86370873	1.1224397	0.8740384	0.81503534	0.8128363
Phase-1 RCT-239	1.1426587	1.1939224	1.1353062	1.0183517	1.4855719	1.4244561	1.1483557	1.1877072	1.2254288	1.2677652	1.342256	1.3076787
Phase-1 RCT-47	1.0183092	1.1001234	1.0934472	1.168928	1.3054965	1.1444077	1.0318359	1.0215669	1.0574984	1.0352181	1.0410132	1.0275089
Tryptophan hydroxylase	0.8329787	0.79403496	0.8709495	1.0702983	1.054945	1.1008468	0.9113026	0.9118482	0.82741314	1.087523	0.9589205	1.0685134
Sulfotransferase K2	0.873593	1.0470493	0.5689403	0.8620535	0.79965065	0.8406289	1.0241911	0.65814805	0.550812	0.9945949	0.9977684	1.1242839
Calgranulin B9	0.8102092	0.96909157	0.9462306	1.0785139	0.87471005	1.0081853	0.92071955	0.8544689	0.8532657	0.88002948	0.8722868	0.8165182
Phase-1 RCT-123	1.0235242	0.9633438	0.9743514	1.0897803	1.004225	1.1684424	0.8645892	0.9104608	1.0328788	1.0294488	1.0414743	1.094004
Phase-1 RCT-98	0.99894186	1.0233536	1.0638278	1.0454515	1.1628534	1.2445619	0.9861834	0.9124932	0.9528502	0.94149585	0.91012484	0.94614905
Anusporin-3 (ADP3)	0.89344945	0.8692567	0.96432086	1.0991408	1.0833518	1.2539715	0.9849454	0.9794937	1.050864	1.0339056	1.0655377	1.0737449
Shary-COA decarboxylase, liver	0.8583053	0.1632972	2.223468	0.5809913	0.727225	1.687965	1.1672907	0.8880083	0.8858439	0.6930768	0.61713878	0.5143562
Phase-1 RCT-64	1.1572549	1.1005623	1.5705352	0.9767823	1.1150166	1.1452895	0.74567028	0.82643104	0.58391833	1.2032949	1.1845014	1.2557415
(1) Gene expression data for 24 hour timepoint are presented as mean ratio of treatment/control for all 24 hour predictive genes (Table 5).												
(2) Compound and dose abbreviations as in Table 1.												
(3) Individual animal number												
(4) Liver inflammation classification for compound-dose group at 72 hr: yes=neor, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed												
(5) Predictive gene (as in Table 5 and as included in Table 26)												

Table 28

Table 29. Expression Data for 24 Hour

[illegible]

Phase-1 RCT-49	0.84219947	1.094226	2.166884	0.75395864	0.92050048	1.2418224	0.990266	0.9240159	0.9265115	1.0464159	0.90355814	0.8942480
Calgranulin B3	1.166662	1.8070114	2.1341743	0.93200403	1.0208627	1.0262024	0.956528	1.1032516	0.9822274	1.1935297	1.0586398	1.0586398
NADP-dependent isocitrate dehydrogenase, cytosolic	0.8227579	0.6022169	0.555531	1.1111801	0.9364963	0.8681596	1.1805204	1.330749	1.0657997	0.9547064	0.8089185	0.8089185
Octamer binding protein 1	1.0179598	0.9920271	0.735401	1.1806677	1.0778073	0.96051615	1.0221442	1.010579	1.0338701	1.0150313	0.9855217	1.1808434
Sodium/bicarbonate cotransporter	0.7684667	0.5801717	0.5801717	0.732075	0.9933712	0.91316587	1.0368426	1.0869092	0.9497523	0.7471124	0.9879446	1.0390545
Phase-1 RCT-174	0.76111845	0.7581213	0.5533995	0.940281	1.051865	0.87476447	0.9407778	0.9403379	0.91280178	1.0391112	0.9164716	0.97088057
Phase-1 RCT-77	0.7503459	0.7911517	0.4791837	0.9805824	1.0881204	0.7934308	0.8868643	0.831947	0.708946	0.8846899	1.1470879	1.0001813
Inositol polyphosphate multikinase [pmk4]	0.49733773	0.40395946	0.38857898	1.2118464	1.2089987	0.8343308	1.0359182	0.9829549	0.7684022	0.95704334	0.9407848	0.9120569
Phase-1 RCT-256	0.7770574	0.61844707	0.30347252	0.9810751	0.8932986	1.00893296	1.0589785	0.89893657	0.9687098	1.0142882	0.8726668	0.8726668
Equilibrium nitrobenzylthioinosine-sensitive nucleoside transporter	0.6654703	0.39645544	0.2583559	0.9590571	0.98968345	0.713909	1.1697053	0.8976288	0.89304844	0.76163514	0.9282593	1.1117777
CDK102	0.9067937	0.86421376	0.7550871	1.1537626	0.9561138	0.9013158	1.0825249	0.857643	0.9738338	0.83690417	1.0488386	0.8947433
Phase-1 RCT-209	0.85024416	0.7332879	0.5971278	1.1338282	1.0853161	1.092144	0.9323238	1.1122012	1.0123931	1.037422	1.069855	0.98814645
NAAD-cytochrome b5 reductase	0.76216596	0.63331974	0.58729468	0.8211148	0.8156262	0.74394576	0.7848799	0.84192016	0.83455287	1.1223849	1.426883	0.84289235
Dynamin-1 (D100)	0.8585761	0.78091645	0.42082837	1.169634	1.1217867	1.0587527	1.0252057	0.8898	0.9371175	1.021319	1.1168324	0.8928621
Senescence marker protein-30	0.40954465	0.2444617	0.08828133	1.3176931	0.9055898	0.835591	1.0521354	0.8235263	1.1342849	0.22490759	0.37810153	0.31163177
Phase-1 RCT-89	0.8349818	0.676441	0.33458933	1.1420949	0.8508865	0.93144006	1.177015	1.0687109	1.0850333	0.8057168	1.168038	1.0576782
Canine palmitoyl-CoA transferase	0.89609428	1.4206582	1.1766206	1.0028381	1.223678	1.1327269	0.9759621	0.9801424	1.031357	1.2626309	1.1620997	1.43580013
Alpha-2-microglobulin	0.7206568	0.5284509	0.26311472	0.78797835	0.9774933	0.4419232	0.8103369	0.54135966	0.544737	1.2882164	0.5158583	0.22284019
Acylproteolipin CII	0.70201623	0.7529576	0.46395576	1.0322559	1.2722049	1.0957452	0.9146662	0.90213	0.8632187	0.5120965	0.7641302	0.51784796
Phase-1 RCT-141	1.074807	1.338568	1.4737027	1.3028445	1.0383123	0.9416842	1.1328342	1.1679202	1.1673083	1.1145178	1.1013969	1.7933372
Phase-1 RCT-289	1.2352824	0.9157325	0.2936325	1.7906849	1.7655844	1.4077353	3.1209016	1.8846874	1.8532765	1.892757	1.7617538	2.1302772
Phase-1 RCT-1	0.777935	0.7144694	0.4531896	1.1787394	1.0655462	0.9373429	1.0272236	0.86128765	0.89218545	0.7427473	0.93818635	0.7081744
Endothelin-1	1.0576122	0.9178735	1.0897173	0.9496148	1.0423923	1.2456393	0.9424412	0.88252434	0.9780841	0.8983858	0.88928895	0.84649503
Phase-1 RCT-282	1.0629691	0.98475473	1.1614578	0.8068667	1.0087091	0.9752257	0.9550185	1.038217	0.97847943	1.2265017	0.8707087	1.0986071
Phase-1 RCT-140	1.085484	1.0923316	1.1570865	0.8878006	0.98020715	0.97489405	0.92928284	0.80616024	1.0552277	1.104457	1.0981885	0.85298434
Cylin D1	0.64828155	0.5689536	0.9603462	0.9322792	1.0873454	0.9002315	0.7832171	0.8818784	0.8651854	0.9132339	0.8580039	0.91540194
Phase-1 RCT-287	0.9263965	0.9105778	0.6290068	1.1243967	1.020343	0.9072815	1.1681344	1.0110793	1.0009038	0.9162077	1.033396	1.0931904
Phase-1 RCT-281	0.87205687	0.78147696	0.78147696	1.14422	0.871383	0.9376603	0.8662633	1.0928745	1.1466554	0.8431336	0.7575521	0.5638483
Retinol-binding protein (RBP)	0.95011175	1.1611886	0.74046874	1.0332462	1.2397898	0.84526354	0.9539542	1.00428	0.9788228	0.9303708	1.3381288	1.0885001
ATP-stimulated glucocorticoid-receptor	0.7426558	0.8263415	0.5014418	1.1547348	0.9011321	0.91859256	1.1436354	1.0740182	0.98813816	0.8014372	0.88725024	0.72278017
trans-ocallin monomer (Gyk)	1.056609	1.5934355	2.4880745	0.7949322	0.9441071	1.1333096	1.0417559	0.9283801	1.009548	1.1459387	1.020537	1.5423852
Phase-1 RCT-50	1.0151789	0.9959	1.828559	1.0288922	0.83204457	0.9898268	1.0089598	1.0481496	1.0201697	1.3594375	1.0729209	1.2578149
Pyruvate kinase, muscle	1.1032878	1.4784549	2.2469057	0.8656605	0.95852166	1.0811801	0.94116183	0.98249346	0.9503574	1.1913778	1.0059475	1.116744
PAR Interacting protein	1.1852125	1.6278102	1.5158077	1.502217	1.3752702	1.1748644	0.8711633	1.3331665	0.9139637	0.9822501	1.0615329	1.4231829
Nucleoside diphosphate kinase beta isoform	1.1502702	1.2340784	2.2302	1.0942502	1.0874458	1.1202632	1.2609528	1.1410224	1.1584694	1.055819	0.8069458	1.0802016
Gadd153	1.5541166	1.8837384	3.7658872	1.2116332	1.93881	0.9362847	1.1707132	1.0162472	0.9023892	0.90603876	1.1553987	1.0494683
Insulin-like growth factor binding protein 1	1.11818	1.0887729	0.9092059	0.9286083	1.0100199	0.92186394	1.1451765	1.0243174	1.0140023	1.2371001	1.1112157	1.2345593
c-H-ras	0.591341	0.2920545	0.17752759	0.9699004	1.0606474	0.8711633	1.3331665	0.9139637	0.9822501	0.5787132	0.9697285	1.162436
N-hydroxy-2-acetylaminofluorene sulfoxidase (S11C1)	0.46384344	0.31413427	0.30732483	1.1004856	0.93298534	0.8987243	1.0467755	0.9959533	0.99890684	1.6028605	1.4712092	1.8630989
Phase-1 RCT-52	0.4712479	0.46939865	0.2941065	0.854951	0.84336774	0.64286124	0.6523874	0.7239008	0.74384224	0.65271664	1.0028344	0.6043494
Alpha 1 - inhibitor III	0.95045644	1.0124365	0.6508823	1.2924821	0.9774518	0.85227354	1.5759382	1.1984808	1.141301	0.55555797	0.8608423	0.9322834
Steady carrier protein 2	0.7554135	0.58161473	0.5400983	1.1087461	0.98051683	0.94880788	0.8956594	0.90925777	0.8780937	0.50532838	0.78048545	0.751899
Organic anion transporter 3	0.71294475	0.7249254	0.43257424	0.86276873	1.0128975	1.0103006	1.1333899	1.1462992	1.0020114	0.828958	0.7476181	0.6585489
Calgranulin B4	0.64892598	0.55284573	0.3135115	1.0325558	0.8200584	0.72851035	0.7444952	0.82067613	1.056177	0.9856007	1.1956047	1.2028912
Phase-1 RCT-182	0.75011414	0.5714492	0.3641312	1.0356214	1.0414069	0.81692636	0.8332265	0.87372295	1.0838338	1.180438	1.3036721	1.2147846
Calgranulin B8	0.91913486	0.8087523	0.80218287	1.1384961	1.067388	1.0906044	1.2100272	1.0428069	0.9202754	0.8299004	1.1590098	0.78107484
Aldehyde dehydrogenase, microsomal	0.74584305	0.686723	0.23690524	1.2472311	1.1158988	0.9089048	1.0481011	0.83052833	0.83768808	0.856004	1.3818032	0.8505861
Phase-1 RCT-128	0.4853712	0.3891945	0.273727	0.92260283	0.823918	1.0242358	0.76504078	0.78112763	0.93095475	0.5531165	0.5857912	0.3589506
Preproalbumin, sequence 2	0.6165477	0.6097242	0.4759403	1.0539278	1.0392027	0.8748081	1.0114705	0.8600889	0.83871025	0.5814717	0.8695809	0.52739945
Apolipoprotein AII	0.578894	0.4502566	0.314364	1.2452655	0.9107843	0.9107843	1.1317478	0.9083098	0.72063537	0.9821312	0.8595354	0.5149485
Phase-1 RCT-10	0.935245	0.85433865	0.5223651	1.154157	0.9539829	0.9539829	1.0281371	0.91766386	1.0281371	1.1218228	0.70145226	1.1163368
Phase-1 RCT-48	1.1263044	0.67619814	0.5881342	1.3473283	1.2139255	1.2273251	1.0784587	1.0159862	1.0809923	0.9523583	1.2105987	0.8602574
Phase-1 RCT-8	0.6599021	0.6781989	0.53093314	1.003852	1.1344648	0.8925677	1.037696	0.8010858	0.78663166	0.68281883	0.9887927	0.5955002

Phase-1 RCT-188	0.80544215	0.740045	0.4710133	0.87833985	0.8311132	1.0053369	1.0414331	0.9554883	1.0007698	1.0402021	0.7692035	0.87692816
Phase-1 RCT-189	0.5934322	0.68914455	0.40137872	0.80001355	1.04734	0.88347093	1.0040814	1.399429	0.96649347	0.83360577	0.88021245	0.94698984
Beta-oxidation synthase	0.7192086	0.73912287	0.3320991	0.7981522	1.1783565	1.2035953	1.5805954	1.5077472	1.1430087	0.7614476	1.0461049	0.85303134
Phase-1 RCT-206	0.40874118	0.122145048	0.34696293	0.59520914	0.7299408	0.87318124	0.55599266	1.1618317	0.7357143	0.9135502	0.6976052	0.71698174
Carbonic anhydrase III	0.3307657	0.12657292	0.04925316	0.0996143	1.4797466	0.65313475	2.4647228	0.91535839	0.8614183	0.47545522	1.3172245	0.7998987
Phase-1 RCT-291	0.8483954	0.60188336	0.3593634	0.8476734	0.8767466	0.60760655	0.7205252	0.86978155	0.87613577	1.015373	0.9752654	0.9842117
Carbonic anhydrase III, sequence 2	0.5223809	0.6747151	0.28789172	0.9760317	1.0104692	0.6901873	1.0061873	0.8956661	0.48209032	0.7854421	0.73099154	0.9442117
Phase-1 RCT-271	0.760979	0.6178077	0.5952281	1.0119114	1.2025935	1.1240231	1.096185	0.90503794	0.88000448	1.285325	1.6049888	0.7109662
HMG-CoA synthase, mitochondrial	1.3483944	1.5729399	0.38400613	0.88055576	0.8127998	0.8716356	0.69238352	0.87089354	0.8655378	1.265562	1.4160204	0.9413592
Phase-1 RCT-189	0.754809	0.8613764	0.33408114	1.1312658	1.1597629	1.0450487	1.3901923	1.0421152	1.2881481	0.6534645	0.8842895	0.6493718
Phase-1 RCT-40	0.7273161	0.612156	0.37658307	1.0289422	1.0779145	0.8713576	1.2471164	1.0392296	1.1493007	1.0016414	1.4191339	1.5243431
Urinary protein 2 precursor	0.5223417	0.4906604	0.18570831	1.4203913	1.2955624	0.90460026	1.623139	1.1182885	0.891768	0.43916816	0.83013314	0.6843756
Paraoxonase 1	0.52918513	0.49647748	0.38552403	1.0735302	0.9748346	0.71530086	0.5801833	0.8143748	0.7854477	0.4736557	0.7183938	0.68994414
Liver fatty acid binding protein	0.4243076	0.42682940	0.2989723	1.3605846	1.2572317	1.0148991	1.3544377	1.1863332	0.93213946	0.45244125	0.6080644	0.6717665
Phase-1 RCT-38	0.1342319	0.5170985	0.3503669	0.898461	0.9629535	0.6467197	0.8431879	0.7319639	0.7831778	0.5975133	0.8783178	0.55303705
Phase-1 RCT-270	0.8079268	0.6658584	0.4784167	1.2936591	1.0293395	0.9184311	1.1572385	0.8668758	0.8595744	0.834435	0.8915342	0.8894174
Transferrin	0.78573956	0.5636744	0.3704545	1.0831913	0.8703755	0.91010948	1.034978	1.017612	1.1249268	0.80016285	1.2150624	0.6598876
Hepatic lipase	0.42702085	0.48375543	0.34003876	1.0544984	1.0685916	0.7892534	0.9569868	0.8584387	0.71007586	0.5367838	0.5898975	0.5991671
Cytochrome P450 11A1	0.523139	0.4276267	0.30470154	0.80255183	0.78975916	0.832728	0.6824089	0.7604451	0.72423637	0.45722082	0.77918464	0.6205138
Phase-1 RCT-175	0.7899556	0.62085235	0.74445424	0.82748725	0.8498367	0.8570248	1.0184084	1.094177	0.82378316	0.88415915	0.9462384	1.115028
Phase-1 RCT-117	0.8121563	0.74684986	0.5778891	1.3509501	1.1245554	1.0682105	1.0927112	1.185719	1.1408782	1.0747622	1.3473818	1.0049487
Phase-1 RCT-137	0.85188496	0.6941977	0.38728034	0.73834413	1.137853	1.260836	1.488873	1.4134079	1.0557526	0.9472243	1.0875833	0.99224305
Melanoma-associated antigen ME491	0.71899844	0.8264345	0.56683634	1.3410574	1.5034795	0.9648276	1.5189723	1.1985208	1.2559632	0.8695185	1.0140086	0.8744351
Phase-1 RCT-12	1.070508	1.142567	1.6861793	0.85934645	0.972976	1.1632527	1.7149369	1.0872234	1.111746	1.0148723	1.0274978	0.8952153
Phase-1 RCT-152	1.3183348	1.0848241	1.8844128	0.8727618	1.0715595	1.0972954	1.1846565	0.89154744	0.9915949	1.153711	1.0728441	0.8380462
14-3-3 zeta	1.2017086	1.8883161	2.355323	1.2008587	1.074902	0.8369855	1.8744584	1.059141	1.0408187	1.217712	1.1903574	2.1739435
Cytochrome P450 2C23	0.5725573	0.44500446	0.2425962	1.1800978	0.9050328	0.7716673	0.7586682	0.9571795	1.0395159	1.287045	0.9881783	0.9200008
Voltage-dependent anion channel 2 (Vdac2)	1.4092424	1.5863334	1.9828924	1.1869392	1.1117816	1.0465214	1.0652288	1.1798	1.0115302	1.3204356	1.2635342	1.6548408
Phase-1 RCT-154	1.1261101	1.3268429	2.225595	1.1033485	1.0670265	1.0284704	1.2491182	1.0822903	1.0341724	1.1362087	1.1200827	1.1436362
Superoxide dismutase Mn	1.2740995	1.1780099	1.8311266	1.7116846	1.2457026	1.2296312	3.5397284	1.620721	2.0311725	1.1780074	1.2885866	1.874692
c-myc	1.1487276	1.4963376	3.2798692	0.842437	1.0022017	1.2002887	0.9308433	0.8894804	0.90680015	1.2421045	1.1196234	0.9720898
Phase-1 RCT-186	0.8889922	0.8501671	0.752177	0.81747895	1.024743	0.8064589	0.8548866	0.7303559	0.8264455	0.8957417	0.9957417	0.88663304
Cyclin G	1.2089912	1.2634448	3.6281564	1.0808889	0.99432415	1.0538665	1.050543	1.0677277	1.0814815	1.6631067	1.3786047	1.8672763
Calgranulin B5	1.1753451	1.1425312	1.9537021	0.8852027	0.9565709	1.2368405	1.0086783	0.9442656	1	1.0590325	0.9105422	0.89300313
Phase-1 RCT-205	0.8978914	1.0250242	1.5839317	1.1171085	1.0065411	1.1502441	1.2027652	0.91864038	1.038263	0.7886134	0.8437588	0.82552946
Phase-1 RCT-68	1.0680911	1.0680911	1.7927418	0.79457974	0.97376275	1.148797	0.9521009	0.8280353	1.0148823	0.934985	1.0278277	1.0908263
Caspase 3	1.3828909	1.4284881	2.0063844	1.0051439	1.0124631	1.067923	1.2328758	1.2680031	1.059149	1.193551	1.1469512	1.3091723
Alpha-tubulin	1.3808901	1.202816	1.3013271	1.0605229	1.0678923	1.280244	1.1807631	1.168854	1.036938	1.1424655	1.1690029	1.1579439
Ribosomal protein L13A	1.087208	0.8075485	1.621208	1.004114	1.0895827	1.2639636	1.1278923	1.038184	1.0887688	0.3369916	0.4852181	0.73351455
ME binding protein	1.008325	2.3484156	2.58199	1.2836893	1.2161244	0.9549441	1.1447708	1.2252439	1.1640684	1.09283	1.1067628	1.1281542
Phase-1 RCT-39	1.117225	1.130881	1.5275593	1.0789182	0.97369754	0.9537656	1.1162554	1.1351788	1.0017319	1.3038343	1.0860491	1.1784645
Cofilin	1.0720022	1.113166	1.5111115	0.90001297	0.95631208	0.90866175	0.9210828	1.1095384	1.015182	0.87320155	0.7374032	1.0035668
Heme oxygenase	0.9080569	0.8878489	1.2810892	1.0442383	1.1501078	0.9147338	1.1039462	1.0121387	0.86601046	1.3628459	1.4277987	1.2566844
Phase-1 RCT-241	1.162314	1.1188248	13.707437	1.370563	0.8856886	1.0590959	1.2553946	1.208338	1.629259	1.2280115	0.9720785	1.3571003
Ribosomal protein S9	1.1525435	1.075287	2.3082335	0.9170438	0.8902985	0.85450985	0.8622955	0.9135258	1.1912299	0.9609395	0.99759273	1.1486952
Phase-1 RCT-258	1.0825168	1.8427363	1.8151308	1.370717	1.4554441	1.1448232	1.3463068	1.1127572	1.2813442	0.88006854	1.0044005	0.9775681
Aglycosyltransferase	1.1894203	1.283456	2.6283574	0.84746786	0.95131224	1.0996037	0.91607696	0.8904625	0.97173387	1.0101322	0.9803071	1.0150908
Phase-1 RCT-180	1.2045884	1.805453	2.8725478	1.0717185	1.1093702	0.8730223	1.050779	1.0963831	0.86940694	2.8383193	1.4502248	1.6329294
Multidrug resistant protein-1	1.3923845	1.5232956	1.8483441	1.0517182	1.097131	1.0639454	1.0443985	1.1445392	1.136211	0.92846304	0.89941086	0.78425074
Osmotically resistant protein-1	1.2409593	1.2022458	1.889119	1.2016214	1.2031754	0.8630464	1.1687711	1.1596897	1.0658762	0.77720368	0.9947537	0.9465558
Thymosin beta-10	1.853862	2.1628338	3.0924182	0.8388308	0.89815405	0.8638907	0.95281144	1.1596897	0.9510727	1.0162787	1.4559195	1.4486058
Phase-1 RCT-72	1.283548	1.3834959	1.7600541	1.3530892	1.2984315	0.9001768	0.8608678	0.9786429	1.1901005	0.87884683	1.1025508	0.90762803
Phase-1 RCT-109	1.0831252	1.8612582	1.8762582	0.8266573	0.9001768	0.8608678	0.9786429	0.9786429	1.1901005	0.87884683	1.1025508	0.90762803
Phase-1 RCT-76	1.4227433	2.054258	2.8055874	1.0784307	1.0028254	1.094703	1.2735577	1.0572506	1.0823812	1.1602819	1.0052807	1.195961
Vacuole membrane protein 1	0.94380976	0.7213281	0.8322128	0.7344004	0.73569655	0.8575652	0.80422246	0.93965846	0.98717268	0.70757127	0.73934746	0.5561597
	0.74106304	0.7889228	0.9891518	0.97510314	1.0280349	0.91438824	0.87053716	0.94879284	0.7937638	1.134854	1.3439544	1.2498098

Phase-1 RCT-158	1.509149	0.898357	5.737264	0.7840985	0.94041814	1.2141839	0.9017363	0.8752735	0.88783624	1.0464157	0.8725178	0.98375803
Phase-1 RCT-113	1.0030731	0.9553908	1.085398	0.7687303	0.86591506	1.0889928	0.80213954	0.9359237	1.1581231	1.1273117	1.3433948	1.3078744
Endogenous retroviral sequence, 5' and 3'	1.113703	1.1120529	1.6476983	0.8984521	0.8815626	0.8822105	1.0136741	0.589122	1.0823427	0.7625257	0.95809244	0.8334852
LTR												
Beta-actin	3.5981053	2.6481983	9.479847	0.874077	0.75951816	0.8457706	0.832542	0.7940342	0.8287778	0.8435825	1.1258684	0.8400922
Phase-1 RCT-65	1.4880252	1.382388	1.7629182	0.84955285	1.0112531	1.0233538	0.9172255	1.0764174	1.0359106	2.0863486	1.8928691	1.8259807
MHC class I antigen RT1A1(0) alpha-chain	2.1031258	1.764885	2.450382	1.0174537	1.239028	1.110735	1.1624255	1.4728005	1.2371802	1.8084649	1.8132389	1.5140027
Bax (alpha)	1.2847227	1.3057766	1.6203444	0.9552065	0.94724494	1.0461248	1.0295255	1.037648	1.0487188	1.4329258	1.0629381	1.1881137
Carbonyl reductase	1.2182208	1.1435828	1.9515422	0.87959135	1.0405794	1.1666231	0.88612187	0.93127068	1.0360234	0.82655826	0.74112225	0.8881411
Beta-actin, sequence 2	1.3000535	0.9411416	1.5839938	0.89351854	1.0175153	0.9491605	1.1273112	0.92457116	0.9867185	0.77316848	0.95538956	0.81783006
Interleukin-10	1.2573122	1.2583014	1.15543	0.8347528	0.9072267	1.0616845	0.9555349	1.0286389	1.0087113	1.1107692	1.0051288	1.0568814
Phase-1 RCT-191	1.4874156	1.4978594	2.5144691	0.79182127	0.944108	1.0833651	0.9738737	1.061395	0.97739047	1.577658	1.4074147	1.3583995
Phase-1 RCT-111	0.9628382	0.7488058	0.891614	0.7867344	0.7501912	0.8048188	0.8289749	0.9092138	0.897782	0.7876749	0.8444158	0.77813165
Apoptosis-regulating basic protein	0.84955945	0.80177714	0.51049224	1.2739198	1.0292126	0.89827718	1.2405902	0.9525243	0.91634444	0.9032715	0.8886081	0.81751163
Glutathione peroxidase	0.31487553	0.28059127	0.2105958	1.2322102	0.93936074	0.800976	0.8100338	0.9687832	0.8913283	0.8166822	0.8085324	0.7700366
Phase-1 RCT-239	1.2478604	1.3921679	0.88785267	0.64906317	0.884122	0.8892142	0.82507675	0.90073115	0.8758945	1.47695	1.247861	1.1122837
Phase-1 RCT-67	0.95358756	0.9091871	0.88785267	0.64906317	0.884122	0.8892142	0.82507675	0.90073115	0.8758945	1.47695	1.247861	1.1122837
Typophan hydrolase	0.96965384	0.8833852	0.811556	1.26178319	1.0104786	0.7435482	0.82507675	0.90073115	0.8758945	1.47695	1.247861	1.1122837
Sulfotransferase K2	0.7919286	0.9044316	0.8878215	1.1816319	1.0821085	1.2328321	1.8872883	0.8300704	0.9173915	1.0094985	1.147391	1.2343883
Calgranulin B9	1.1137381	0.6265162	0.4296531	0.9177358	0.9157032	0.8701664	0.8300704	0.9173915	1.0094985	1.147391	1.2343883	1.078247
Phase-1 RCT-123	0.9078658	0.8830165	0.8335634	0.94963695	0.88376737	1.0200946	0.77529	0.80910053	0.983858	1.0742905	0.8978288	1.0744553
Aquaporin-3 (AQP3)	0.8883712	0.78359263	0.699142	0.8903397	0.88376737	1.0200946	0.77529	0.80910053	0.983858	1.0742905	0.8978288	1.0744553
Sleazy-CoA desaturase, liver	0.97605926	0.7777109	0.84368026	0.8871131	1.1215242	0.8784555	0.93314016	0.94294383	1.0928211	0.94697225	1.0266987	1.066758
Phase-1 RCT-84	0.10946323	0.101871716	0.067612566	0.34185332	0.79246926	0.89108914	0.5460868	0.36864343	0.2775688	0.8788178	0.4072803	0.51753175
	0.9507219	0.7682822	0.6497181	0.8628661	0.8468048	0.9795103	0.8822889	0.9942345	0.95445174	1.6802806	1.0730371	1.216889
(1) Gene expression data for 24 hour												
timepoint are presented as mean ratio of												
treatment/control for all 24 hour predictive												
genes (Table 5).												
(2) Compound and dose abbreviations as in												
Table 1.												
(3) Individual animal number												
(4) Liver inflammation classification for												
compound-dose group at 72 hr: yes=recr.												
necrosis observed; yes=both; necrosis with												
inflammation observed; no, no histopathology												
observed												
(5) Predictive gene (as in Table 6 and as												
included in Table 2b)												

Table 29

Table 28. Expression Data for 24 Hour Timepoint (1)															
Compound-Dose (2)	1834	1835	AZA 200	1834	AZA 200	1835	1834	AZA 200	1835	1834	AZA 200	1835	1834	AZA 200	1835
Animal Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	3.7113097	2.4193583	2.9586164	1.1211765	1.0631752	0.8050484	1.3450783	0.8904965	0.9162257	0.93473125	1.012718	0.83510315	1.397174		
Gamma-actin, cytoplasmic	2.32422	1.7600894	2.3341157	0.9507642	1.0180053	0.9959363	0.9651043	1.0086558	1.2072213	1.0712887	0.97658443	1.070357	0.9624114		
Phase-1 RCT-145	1.3841097	1.3486842	0.9782565	1.1186035	0.9868724	0.9174147	1.0454173	1.0248128	1.1098564	1.3675758	1.6485288	0.8355958	0.8355958		
Cad45	0.8966337	0.76912	0.5239505	0.92924505	1.005316	0.9592632	1.1146816	1.012988	1.0248717	0.9848562	0.8693752	0.8357989	1.043434		
Phase-1 RCT-78	1.386451	2.914145	1.3099786	0.861465	0.7583471	0.8893236	0.8946722	0.9228005	1.0511218	1.02494	0.9524623	0.9062307	1.560765		
Fas antigen	2.8095555	1.9557178	1.480267	0.926639	1.0333728	0.96840516	1.03152046	0.8780421	0.8847328	1.125653	1.0495108	0.7755232	0.98536943		
Macrophage inflammatory protein-2 alpha	1.2075762	1.4129983	1.1606441	1.0813729	1.2109368	1.1266248	1.0635471	1.0215065	1.0833167	1.6090201	1.0377718	1.1605984	1.1605984		
Influrin beta1	3.581343	2.201169	2.083282	0.9522653	1.2177723	0.8031694	0.97230065	0.84028527	0.8895836	1.1437695	0.9253087	0.8841282	1.086318		
Phase-1 RCT-207	0.8679357	0.95714825	0.59875878	0.88543545	1.0281122	1.0184483	0.60180175	1.021687	0.8933078	0.9501645	0.7044028	1.0990145	1.5376316		
Aspartate aminotransferase, mitochondrial	0.7658264	0.9033974	0.8849818	0.8725127	1.0184483	0.60180175	1.021687	0.8933078	0.9501645	0.7044028	1.0990145	1.5376316	0.871053		
Casitin-alpha	0.4658247	1.004493	1.813573	1.2113084	1.1206623	0.9055895	1.0205536	0.974448	0.9585536	1.0183761	1.1273617	0.979103	1.0726871		
MAP kinase kinase	0.84783785	1.0738868	1.006297	0.8081174	0.7935379	0.91780746	0.86802345	1.0451504	0.9585536	0.9330227	1.0700102	0.9289074	1.1108898		
Hepatocyte growth factor receptor	0.8775978	1.060353	0.7803883	0.962752	0.8489394	1.0288925	1.0075188	1.0682081	0.9052023	0.9025522	1.0749507	1.3507537	0.8408135		
Sodium/glucose cotransporter 1	1.1213756	1.1740056	1.3467734	1.1788038	1.478218	1.1438338	0.86622946	0.7570927	0.8052023	0.9025522	1.0749507	1.3507537	0.8408135		
Phase-1 RCT-27	0.6356455	0.6028852	0.3920743	1.8331004	0.6129292	0.7212883	0.86622946	0.7570927	0.8052023	0.9025522	1.0749507	1.3507537	0.8408135		
Phase-1 RCT-50	2.0424013	1.8918456	1.4971058	0.9201075	0.8508708	1.1421466	0.92215855	0.91657495	0.9012362	0.981509	0.8415807	0.9265658	0.7555072		
Phase-1 RCT-288	2.3653833	0.7402613	2.067914	1.0558828	1.020282	1.0567778	1.0074214	1.0741752	1.281383	0.8380487	1.004704	1.1409207	0.9492441		
Phase-1 RCT-37	0.5170948	0.84362323	0.4978931	1.2287514	1.0697432	1.2011045	0.9788338	0.9481354	0.9404604	1.046763	0.7521556	0.8453284	1.4245571		
Organic cation transporter 3	1.1884115	1.2056628	1.2829539	1.0380094	1.1062013	1.0284148	0.973393	1.0841764	1.2106717	1.0882636	0.93884504	1.378498	0.9750233		
60S ribosomal protein L6	1.2886381	1.355889	1.4426008	1.001665	1.1819894	1.0736699	0.9742058	1.0113645	1.215718	1.279223	0.9607087	1.1549846	0.8910155		
Zinc finger protein	3.7633471	2.9543152	1.678247	1.0690393	1.0063345	1.0674199	0.8448783	0.8700281	1.0248989	1.265573	1.045863	0.87332124	0.97333705		
Calgranulin B2	1.6034024	1.084336	1.5095127	0.9304354	0.9273287	0.8416591	1.0294785	1.0393023	1.1194537	0.9628796	0.9595952	0.7853555	0.9800063		
Phase-1 RCT-42	0.39819086	0.38292876	0.5293859	1.1732237	1.428317	0.87751987	1.0870357	0.955517	1.0321228	0.785618	0.8940818	1.0910438	1.074858		
Phase-1 RCT-116	0.47178745	0.8337083	1.4484042	1.2332303	0.1038815	0.9575027	1.1525084	1.0871452	1.1008068	0.8925118	1.189518	0.8993268	0.77276548		
Multi. homologue (MLH1)	1.697515	1.1693022	1.4484042	1.2332303	0.1038815	0.9575027	1.1525084	1.0871452	1.1008068	0.8925118	1.189518	0.8993268	0.77276548		
Phase-1 RCT-70	0.7189253	1.1416415	1.1471843	1.0097011	1.2063038	0.97221553	1.028735	0.9754414	0.9661398	0.9784181	1.0472835	0.8545436	0.7135738		
Sorbitol dehydrogenase	0.98891145	0.77759238	0.8647124	1.0761717	0.839068	1.0883153	1.1257168	1.1545858	1.5071628	1.318938	1.0872784	1.2213736	0.9258748		
Phase-1 RCT-24	1.1920924	0.6039197	1.2893654	1.42742	0.0359833	0.8405645	0.9584715	1.014582	1.0128402	0.7814168	1.0145288	0.8615867	1.4541761		
Calgranulin B1	1.5881757	1.3432547	1.9534757	1.003474	0.9598739	0.79419285	1.0533413	1.0848785	1.0588228	0.912872	0.93206783	1.1187344	1.0440777		
Elongation factor-1 alpha	2.0919689	2.057847	1.3752365	1.0909597	1.1157644	1.2465807	1.3338353	1.313477	1.2803754	1.6432963	1.0348657	1.1669741	1.2589861		
L-glutono-gamma-lactone oxidase	0.54629153	0.3388092	0.52406645	1.3416235	1.0231903	0.8933877	1.0218835	1.0551633	1.1811883	0.7264397	1.0787615	1.4016356	1.5709223		
Phase-1 RCT-33	1.1384608	1.2323588	1.3022552	0.92048634	0.7828034	1.1116837	1.2142392	0.8971235	0.88330724	0.856028	0.8453579	0.8376368	1.207688		
c-Jun	0.8258116	0.42523025	0.6088586	1.0338576	1.2484821	0.8528396	1.111006	0.9091355	0.88657534	0.77834116	1.0137084	0.8187439	0.8712474		
Phase-1 RCT-233	0.8427327	0.7448815	0.9063669	1.2328769	0.9993059	0.9158223	0.98140603	0.8880046	0.8883501	0.8844469	0.9325002	0.9857375	0.9250174		
Phase-1 RCT-242	2.7421343	2.072074	1.7595774	1.0927984	0.9066016	0.8368456	0.85578907	1.120124	0.9842751	0.8098306	0.87356436	1.0180587	0.8815234		
Phase-1 RCT-181	1.0853324	0.8594187	0.7284623	1.0027984	1.0350257	0.8667831	1.0487007	0.78753008	1.0195429	0.8927769	0.7917763	0.9882314	1.1698415		
Phase-1 RCT-185	0.76924827	0.8287317	0.7280609	1.1336601	1.0350257	0.8667831	1.0487007	0.78753008	1.0195429	0.8927769	0.7917763	0.9882314	1.1698415		
Phase-1 RCT-178	3.400019	2.8933642	2.2101238	1.0632827	1.0011777	1.0370518	0.8289163	0.945356	0.9892031	0.9444003	0.9053437	1.007073	0.901138		
Phase-1 RCT-144	1.9008697	1.1077625	1.761654	0.9282673	0.7903275	0.7903275	0.7903275	0.7903275	0.7903275	0.7903275	0.7903275	0.7903275	0.7903275		
ILK-a	1.8604289	1.5882152	1.7455848	0.9988046	1.2946097	0.99121876	1.2760468	0.8701468	1.0878115	1.1292201	0.98297863	1.1370168	0.9275752		
Phase-1 RCT-225	1.4242824	0.8452123	1.1050589	0.75032534	0.97818387	1.2174127	0.8831147	1.392437	0.8831147	1.392437	0.8831147	1.392437	0.8831147		
60S ribosomal protein L6 (alternate clone 1)	2.437476	2.31947	2.1404087	1.0003496	1.1675287	1.0800574	1.1919546	1.4806006	1.3701717	0.9888895	1.2543863	1.3254699	1.3254699		
Beta-actin, class I	1.6286935	0.708052	1.450414	1.0390584	1.0174048	0.73052526	1.2538584	1.2848592	1.6821	0.7728321	1.2201084	1.1359599	1.6035566		
Multidrug resistant protein-2	2.8270404	1.8721441	2.0098054	0.92627585	0.7926945	1.0884764	0.9789383	1.3038892	1.1755364	1.8075417	1.4280768	0.9500386	1.1236757		

Table 29

Phase-1 RCT-49	1.4148855	0.7748877	1	0.9541073	1.0886465	0.8911991	0.8915003	0.9885266	0.935126	0.9523861	0.90540725	0.92585754	0.8324286
Calgranulin B3	1.1856916	1.1017321	1.0299844	0.9643671	1.0451869	1.0551181	1.0551181	1.0451869	1.0027916	1.064771	1.0387108	0.97562313	1.1261885
NADP-dependent isocitrate dehydrogenase, cytosolic	1.0652645	0.9635735	0.7178788	1.0177008	1.1328458	0.9843076	0.92313564	1.0080582	1.0049868	0.944085	1.0001809	1.099728	1.0704346
Oxyster binding protein 1	0.78040384	1.2553581	0.87845575	1.133714	1.035861	0.8817844	0.8817844	0.8817844	1.0652164	1.7685418	1.3887747	1.7675744	0.8062378
Sodium/bile acid cotransporter	0.35449892	0.5923152	0.42051202	1.153714	1.2327828	1.1836231	1.1836231	1.1836231	1.5241037	1.1226345	1.0126857	1.2933568	0.7290907
Phase-1 RCT-174	0.8953893	0.81283876	1.1836231	1.035446	1.2327828	1.1836231	1.1836231	1.1836231	1.5241037	1.1226345	1.0126857	1.2933568	0.7290907
Phase-1 RCT-77	1.2372848	1.1577238	1.2570834	1.0220433	1.2886647	1.0546501	1.2505639	1.2453387	1.8138458	1.3472056	1.0486833	1.4085848	1.2354578
Inositol polyphosphate multikinase (ipmk4)	0.5782218	0.81642385	0.4954063	1.1532516	1.1784689	1.1530523	1.1834895	0.8768357	1.560445	0.8203457	0.6203838	0.9230838	1.2558439
Phase-1 RCT-256	0.6233309	0.5814197	0.5354769	1.3848334	0.82076734	1.1868181	1.0822227	1.0938844	1.021899	1.0381824	1.4391258	1.3938466	1.3938466
Equilibrative nitrobenzylidene-sensitive nucleoside transporter	0.46394913	0.48531804	0.5670274	0.96419644	0.97268885	0.87457097	1.0759777	1.0062885	0.96287563	1.018653	1.1260031	1.2230359	0.94093314
CDK102	0.62530863	0.6325943	0.58004265	1.0691475	1.1245549	0.9881231	1.0525408	0.88339244	0.88313635	0.98118854	0.8895303	1.1398822	1.0885777
Phase-1 RCT-209	1.0001342	0.9683045	0.9886667	1.1269405	1.0814445	1.0618719	0.89556384	1	1.019847	0.9251341	0.9098289	0.98910405	0.74322766
NADH-lycochroma b5 reductase	0.8351456	0.8324033	0.66974596	1.2844975	1.0878421	0.8552514	1.4908028	1.128276	1.1806281	0.8301768	1.0218052	1.2486472	1.2486472
Dynamin-1 (D100)	0.84472716	0.7388033	0.7987573	1.1705406	0.92267275	1.0720388	0.9048155	0.92819273	0.8374143	0.7524784	0.8618124	0.7780445	0.7780445
Sensence marker protein-30	0.10437873	0.69281836	0.11436552	1.0138436	1.1928709	1.1474478	1.0320355	0.69751	0.8170337	1.0384783	1.4015883	1.090952	0.87080427
Phase-1 RCT-48	0.5954438	0.5911951	0.88288153	1.0488904	1.0163073	0.9257058	1.1293125	0.9676881	0.8607842	0.9187344	0.9053943	1.0959551	1.2128415
Camitine palmitoyl-CoA transferase	1.621366	1.9778488	1.5281978	0.95169365	0.94230133	0.8880208	0.9354355	0.8717857	1.1570069	1.3038671	1.2255195	1.0168786	1.0038165
Alpha-2-microglobulin	0.12543553	0.1890419	0.14931838	0.9343721	0.50424296	0.82650594	1.6515193	0.65339285	0.7916533	1.118971	0.9160097	2.666176	0.8748356
Apolipoprotein CIII	0.62419015	0.58414714	0.4123555	0.94329816	0.88517257	0.88517257	0.88517257	0.88517257	0.88517257	0.88517257	0.88517257	0.88517257	0.88517257
Phase-1 RCT-141	3.2298612	6.9163303	2.3801976	0.816013	0.781802	1.1737773	1.1436108	1.1286867	1.021238	0.93852164	2.8414452	1.4512878	1.6236413
Phase-1 RCT-289	0.8474728	0.7682819	0.7682819	1.0573394	1.066336	0.8989091	1.0573394	0.8989091	1.0573394	0.8989091	1.0573394	0.8989091	1.0573394
Endothelin-1	1.1088652	0.9688167	1.0413928	1.1378936	1.0445148	1.2817282	0.93395436	0.95786763	0.9206926	1.3785037	0.9206926	1.3785037	0.9206926
Phase-1 RCT-262	0.88845475	1.1466623	1.0410484	0.9376767	0.8829485	0.8829485	0.8829485	0.8829485	0.8829485	0.8829485	0.8829485	0.8829485	0.8829485
Phase-1 RCT-140	1.2765715	1.0285	0.975914	0.9266805	0.8114068	0.8923118	0.9144363	0.9873918	1.0381533	0.93224967	0.82086938	1.0018278	1.0018278
Cyclin D1	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043	0.8283043
Phase-1 RCT-287	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703	0.8071703
Phase-1 RCT-281	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234	0.85263234
Retinol-binding protein (RBP)	1.251445	1.6014091	1.1282146	1.135686	1.2551725	1.084481	1.262337	1.0768796	1.0494844	1.3762137	0.98479374	1.4108398	1.1771501
ATP-stimulated glucocorticoid receptor	0.624183	0.5888142	0.5422951	0.9001137	1.1303032	1.0758237	0.95707595	0.85693425	1.2275275	1.0915653	1.0891418	1.0600976	1.0600976
Translocation promoter (GyS)	1.9178984	2.7384281	0.8348237	1.4176254	1.188578	1.1077823	1.0693675	1.1676043	1.0242358	1.1100404	1.1653089	1.0203103	1.0203103
Phase-1 RCT-60	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755	0.72984755
Pyruvate kinase, muscle	1.1416324	1.7582772	2.5890565	0.8145434	1.1607314	0.96159436	1.0612392	0.9701883	1.005397	1.0038468	0.9003606	1.0913972	0.8828282
PAR interacting protein	2.7082071	2.075579	1.4382755	1.0324707	1.1152691	0.83111694	1.1390778	1.0559496	1.2782239	0.7841501	1.0632835	1.2344182	1.1849014
Nucleoside diphosphate kinase beta isoform	0.25499564	0.3162328	0.36131755	0.9849221	0.8155674	0.912648	1.0623893	1.2117546	0.92031634	1.0873955	1.1460673	1.3531811	1.0586367
Gadd153	1.5431488	1.8932058	1.5897092	0.90638196	0.90843066	0.8978809	0.83588946	0.8680713	0.86004164	0.8923781	1.0003737	0.85028895	0.85028895
Insulin-like growth factor binding protein 1	7.472077	9.646749	1.6741246	1.2307438	1.2583363	1.2087088	1.2177824	1.2859556	1.047168	2.1503225	1.1949488	1.141738	0.8980807
c-H-ras	1.3059786	1.327043	1.2895405	1.0393495	0.8863897	1.1840907	1.0482775	1.104404	1.2867297	1.0591182	1.0370576	1.0000782	1.1228889
N-hydroxy-2-acetylaminofluorene	0.25499564	0.3162328	0.36131755	0.9849221	0.8155674	0.912648	1.0623893	1.2117546	0.92031634	1.0873955	1.1460673	1.3531811	1.0586367
sulfotransferase (ST1C1)	0.39860013	0.44502813	0.5109392	1.3174424	1.1812415	1.024859	1.3433112	1.0878819	1.2589234	0.84708785	1.0517863	0.9226895	1.1163683
Alpha 1 - inhibitor III	0.535313	0.4228615	0.3517941	1.1268437	1.377275	0.78566176	1.1278784	0.81316113	0.76321135	0.89521384	0.81685648	0.78056575	1.060873
Sterol carrier protein 2	0.60767734	0.65710473	0.4824562	0.92040294	0.9145578	1.013577	1.0897801	0.91935766	1.2878108	0.9344444	1.0759339	1.2940714	1.1929557
Organic anion transporter 3	0.44978286	0.6878363	0.8393967	1.1012778	0.97355425	1.023828	0.95389665	1.0919858	0.88145556	0.7736386	0.9169813	0.939876	0.9749419
Calgranulin B4	0.42005438	0.6125976	0.40148897	1.2328315	0.9380732	1.0429778	0.73368847	0.98278746	0.92043008	0.84254324	1.0543047	1.0070653	1.4978415
Phase-1 RCT-182	0.90876913	1.0611457	0.66145897	0.95595294	1.1186393	1.0371811	0.9949247	0.9571756	1.0689924	1.0125008	0.75401723	1.001811	1.1232387
Calgranulin B8	0.73806477	0.8859602	0.48576554	1.0949107	0.8949155	1.0222046	1.0734015	1.0419233	0.9563665	1.2111809	0.783977	0.91032608	0.9925856
Aldehyde dehydrogenase, microsomal	0.89021677	1.0531714	0.60881105	1.2564398	1.1524246	0.9332892	1.1424881	0.93170376	0.94215477	0.93846896	0.72485228	1.0672041	1.4197204
Phase-1 RCT-128	0.74281706	0.48107618	0.43388432	0.9239988	1.1524246	0.9332892	1.1424881	0.93170376	0.94215477	0.93846896	0.72485228	1.0672041	1.4197204
Phase-1 RCT-102	0.47242426	0.27633217	0.30865347	0.9749973	0.985925	0.508824	0.78697618	1.045929	1.0054173	0.43289555	0.57048863	0.73088785	1.2747341
Preprocalgranulin, sequence 2	0.7066922	0.6150197	0.4767758	0.92211956	1.1162556	1.06702	1.1117679	0.7172552	1.010197	0.9880745	0.70803636	1.040158	1.3228886
Calgranulin AII	0.9525993	0.99091434	0.63391644	1.6774671	1.2192104	1.271654	0.9771672	0.85118636	0.97124214	1.5819123	0.758868	0.708578	1.377405
Phase-1 RCT-10	0.7470437	0.88640666	0.59858	1.1770282	0.98537844	1.271654	0.9771672	0.85118636	0.97124214	1.5819123	0.758868	0.708578	1.377405
Phase-1 RCT-46	0.86159458	0.78809883	0.80580586	0.7570757	1.1410823	0.7717118	1.410823	0.9538385	0.7970215	1.0981498	0.6552588	0.988392	1.400528
Phase-1 RCT-8	0.74180825	0.79661556	0.49928217	1.0283206	1.1431545	1.1237843	1.1332012	0.8020883	1.0821699	0.9228808	0.7012718	1.0043598	1.2682446

Table 29

Phase-1 RCT-168	0.8597759	0.7851655	0.7220254	1.0482829	1.4402363	1.1048865	1.0036719	0.8422062	0.9140351	0.8567884	0.9469474	1.0212011	1.1483275
Phase-1 RCT-168	0.8597759	0.7851655	0.7220254	1.0482829	1.4402363	1.1048865	1.0036719	0.8422062	0.9140351	0.8567884	0.9469474	1.0212011	1.1483275
Beta-oxidation synthase	0.555379	0.89780116	0.8950964	0.92911047	0.8000943	0.7559317	0.85795194	1.2408981	1.2408981	1.019412	0.7182498	1.0272918	1.0551369
Phase-1 RCT-286	0.36929093	0.19691522	0.27418447	0.8094505	0.6118775	0.7078477	0.8737327	0.9854241	0.9854241	0.35566003	0.61522377	1.2677956	1.0689818
Carbonic anhydrase II	0.112829156	0.20861771	0.09799624	0.82675316	0.80455804	0.64363697	1.8800402	0.51653927	0.6486241	0.21816134	0.5955399	1.2893048	0.8614489
Phase-1 RCT-291	0.83210254	0.8445127	0.6003609	1.0311136	1.02872281	1.0381668	0.8800889	1.03217	0.8643396	1.237043	0.97443044	1.237043	1.1950005
Carbonic anhydrase III, sequence 2	0.68471225	0.7818511	0.6479824	1.0405071	1.14417281	0.85980274	1.0831454	0.87324154	1.2638318	1.08089	0.7292073	0.8188888	1.1473573
Phase-1 RCT-271	0.81691464	0.908581	0.7150847	0.9373878	1.0488932	0.9673495	1.167427	0.9232683	0.91120255	0.7860035	1.0076057	1.4339507	1.4306257
HMG-CoA synthase, mitochondrial	0.83274394	0.8844293	0.69510967	0.9765373	0.9690708	1.4505692	1.1079396	1.4873178	0.9873746	0.8986317	0.9873746	1.2876908	1.2375789
Phase-1 RCT-188	0.5559788	0.46220037	0.4814428	1.0066552	1.1220125	1.1701125	1.136184	0.9118839	1.0486556	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-40	1.0034037	0.6530308	0.8039675	0.9584477	1.0564356	1.0212855	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Urinary protein 2 precursor	0.39573893	0.4425302	0.39933075	1.0998777	1.1223562	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	1.2375789
Phase-1 RCT-1	0.513634	0.5483122	0.3947224	1.1213222	1.1213222	1.1052593	0.9826656	0.82481398	0.8081772	0.9728603	0.94075804	1.0502566	

Phase-1 RCT-158	0.8529782	1.0217257	1.0114515	0.9601507	0.88396335	0.9384102	0.8706024	0.978675	0.90313625	0.9099813	0.86109435	0.8876883	0.8771778
Phase-1 RCT-113	2.539585	3.000212	2.0188162	1.0412346	0.8413784	1.045839	0.90392303	0.94883325	0.9381916	1.0337348	0.97521746	1.1634045	0.9272844
Endogenous retroviral sequence, 5' and 3'	0.9838678	0.6176182	0.6952485	1.232518	0.47688344	1.1455748	1.022733	0.9853415	0.89411753	1.0212339	1.658879	1.4886384	0.9137785
LTR	2.1455996	1.209876	1.783	1.0188948	0.58634426	0.74767077	1.156623	1.0013711	1.2773529	0.7547822	0.8872546	0.6851123	1.898688
Beta-actin	1.4580955	1.8278515	1.7081408	1.021636	0.94812244	0.9518528	1.2518361	1.1756167	1.09439	1.0598484	1.2147654	0.9552781	1.2402509
Phase-1 RCT-65	1.142385	1.346868	1.7781652	0.9714756	0.77110094	1.0004754	1.1639212	1.0707842	1.2058761	0.9117481	1.1481595	0.8947067	1.2829231
MHC class I antigen RT1A10 alpha-chain	2.1766882	1.5512681	1.7595508	0.98152924	1.0086665	0.8916374	0.9494962	0.98435783	1.154037	0.96588053	1.0425896	0.88769176	1.2283171
Bax (alpha)	1.3698994	1.4438775	1.3818762	0.96913746	0.88128785	0.9892416	0.98255265	0.98053395	0.96338504	1.1054786	1.0237094	0.96952066	0.96952066
Carbonyl reductase	1.8427408	1.0103257	1.03108	1.0071327	0.89916325	0.8376708	1.2135298	0.8339047	0.92205226	0.9453414	0.9060245	0.76106334	1.5744819
Beta-actin, sequence 2	2.3215384	1.7151571	2.398179	1.0358327	0.95744467	0.94039166	1.0407982	1.2014074	1.1651676	0.92534447	0.8868167	0.847269	1
Interleukin-10	0.9189034	0.94873946	0.6107443	0.99160074	0.7552315	0.9540765	0.8243984	1.2391211	1.3852113	0.86401694	1.2289038	1.0531059	1.2033219
Phase-1 RCT-191	0.5646998	0.6107443	0.54422534	1.042234	1.1096537	0.8240878	0.990379	0.8457692	0.90365308	0.9816578	0.930229	0.89948227	1.2033801
Apoptosis-regulating basic protein	0.47857672	0.36687155	0.3344634	0.99042004	1.1326638	0.870524	0.990379	0.8457692	1.0201465	0.650787	0.67018944	0.87592854	1.3055708
Glutathione peroxidase	0.04792484	0.8278147	1.1578431	0.94825286	1.0110597	0.8096378	1.3171164	1.0702546	1.132203	0.8171898	0.8487223	0.8669241	0.7132616
Phase-1 RCT-239	0.89434165	0.7409334	0.9028217	0.9492101	1.0235074	0.9020132	0.9545029	1.0915888	0.97040343	0.81745866	1.1028726	1.2352374	1.1098928
Phase-1 RCT-67	0.5236378	0.83148134	0.7828913	0.9618346	0.93821784	1.0086603	1.092579	0.84138596	0.8721641	0.8672487	1.1089174	1.0597354	1.11071
Tryptophan hydroxylase	1.0618917	1.106641	0.7715051	0.98930657	0.8413951	0.9786207	1.197824	0.86737814	0.8904094	0.7988083	0.91400875	0.8882833	0.88878938
Sulfotransferase K2	0.8408106	0.967394415	0.91437266	0.9831987	0.8644648	0.78149384	0.98928215	0.9576301	0.8670719	0.9168928	0.9134544	0.9342127	0.7620599
Calgranulin B9	0.8852588	0.967394415	0.91437266	1.0375941	0.97762378	0.9152062	0.9115186	0.9126924	0.8680363	0.8653367	0.87559144	0.78284374	0.7789228
Phase-1 RCT-123	0.7810904	0.9889647	0.90062475	0.9147338	1.0337355	0.90322864	0.9585433	0.8958373	0.8868093	0.87135345	0.8684372	0.8343081	0.7789228
Phase-1 RCT-98	0.82073196	0.96937513	0.9551147	1.0094689	1.008212	0.922178	0.9174252	0.9117835	0.90051854	0.87135345	0.8684372	0.8343081	0.7789228
Aquaporin-3 (AQP3)	0.09101388	0.043902956	0.21349524	0.71576955	1.832278	0.05310708	1.5848851	0.8443565	0.8504803	0.042076282	0.887493	1.5378455	4.0331583
Stearyl-CoA desaturase, liver	0.7158292	0.627141	0.7115189	1.3428188	1.0047733	0.89002436	1.1866075	1.2459325	1.4189816	0.7973055	1.1580701	1.1628206	1.1073412
Phase-1 RCT-64													
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes=ncr,													
necrosis observed; yes=bfh, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 28)													

Table 28

Table 28. Expression Data for 24 Hour									
Timepoint (1)	BUS 14	BUS 14	CAD 1	CAD 1	CAD 1	CAD 1	CAD 1	CAD 1	CAD 1
Compound Dose (2)	1745	1745	1746	1746	1746	1746	1746	1746	1746
Animal Number (3)	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no
Gene Name (5)									
Gamma-actin, cytoplasmic	1.49204	0.66414094	0.8668718	1.11125	0.8218571	1.2065281	1.7285603	1.6833553	1.3966328
Gamma-actin, cytoplasmic	0.9669101	0.980446	0.980446	0.980446	0.980446	0.980446	0.980446	0.980446	0.980446
Phase-1 RCT-145	0.76245726	0.9821052	0.9821052	0.9821052	0.9821052	0.9821052	0.9821052	0.9821052	0.9821052
Gad64	1.0704983	1.1552139	1.0704983	1.0704983	1.0704983	1.0704983	1.0704983	1.0704983	1.0704983
Phase-1 RCT-76	1.2360479	0.9835884	0.9835884	0.9835884	0.9835884	0.9835884	0.9835884	0.9835884	0.9835884
Fas antigen	1.1093072	1.0592248	1.0592248	1.0592248	1.0592248	1.0592248	1.0592248	1.0592248	1.0592248
Macrophage inflammatory protein-2 alpha	1.0638702	0.9992428	0.9992428	0.9992428	0.9992428	0.9992428	0.9992428	0.9992428	0.9992428
Interferon beta1	1.018465	0.98283166	0.98283166	0.98283166	0.98283166	0.98283166	0.98283166	0.98283166	0.98283166
Aspartate aminotransferase, mitochondrial	1.3409837	0.96413235	0.96413235	0.96413235	0.96413235	0.96413235	0.96413235	0.96413235	0.96413235
Casest-alpha	0.7811341	0.9766442	0.9766442	0.9766442	0.9766442	0.9766442	0.9766442	0.9766442	0.9766442
Malic enzyme	0.91922575	0.9800503	0.9800503	0.9800503	0.9800503	0.9800503	0.9800503	0.9800503	0.9800503
Phase-1 RCT-30	0.7278507	0.9414725	0.9414725	0.9414725	0.9414725	0.9414725	0.9414725	0.9414725	0.9414725
Hepatocyte growth factor receptor	0.8589863	0.95894146	0.95894146	0.95894146	0.95894146	0.95894146	0.95894146	0.95894146	0.95894146
MAP kinase kinase	1.0041174	0.9036792	0.9036792	0.9036792	0.9036792	0.9036792	0.9036792	0.9036792	0.9036792
Sodium/glucose cotransporter 1	0.8353175	0.5010047	0.5010047	0.5010047	0.5010047	0.5010047	0.5010047	0.5010047	0.5010047
Phase-1 RCT-50	1.0434508	1.0452284	1.0452284	1.0452284	1.0452284	1.0452284	1.0452284	1.0452284	1.0452284
Phase-1 RCT-192	1.5008425	1.0297265	1.0297265	1.0297265	1.0297265	1.0297265	1.0297265	1.0297265	1.0297265
Phase-1 RCT-288	0.92684466	1.053153	1.053153	1.053153	1.053153	1.053153	1.053153	1.053153	1.053153
Phase-1 RCT-37	0.9219961	1.0308381	1.0308381	1.0308381	1.0308381	1.0308381	1.0308381	1.0308381	1.0308381
Organic cation transporter 3	1.3610433	1.6728373	1.6728373	1.6728373	1.6728373	1.6728373	1.6728373	1.6728373	1.6728373
60S ribosomal protein L6	0.91505027	0.9973993	0.9973993	0.9973993	0.9973993	0.9973993	0.9973993	0.9973993	0.9973993
Zinc finger protein	1.1172072	0.8737182	0.8737182	0.8737182	0.8737182	0.8737182	0.8737182	0.8737182	0.8737182
Calgranulin B2	1.1755104	0.9182518	0.9182518	0.9182518	0.9182518	0.9182518	0.9182518	0.9182518	0.9182518
Phase-1 RCT-92	0.7353713	0.99375194	0.99375194	0.99375194	0.99375194	0.99375194	0.99375194	0.99375194	0.99375194
Phase-1 RCT-115	1.1594784	1.1215018	1.1215018	1.1215018	1.1215018	1.1215018	1.1215018	1.1215018	1.1215018
Mutl homologue (MLH1)	1.067806	1.012766	1.012766	1.012766	1.012766	1.012766	1.012766	1.012766	1.012766
Phase-1 RCT-79	0.8719254	0.8937023	0.8937023	0.8937023	0.8937023	0.8937023	0.8937023	0.8937023	0.8937023
Sorbitol dehydrogenase	1.4128883	1.968568	1.968568	1.968568	1.968568	1.968568	1.968568	1.968568	1.968568
Phase-1 RCT-24	1.3186815	1.0817343	1.0817343	1.0817343	1.0817343	1.0817343	1.0817343	1.0817343	1.0817343
Calgranulin B1	1.0671792	1.0960021	1.0960021	1.0960021	1.0960021	1.0960021	1.0960021	1.0960021	1.0960021
Elongation factor-1 alpha	1.2377818	1.058441	1.058441	1.058441	1.058441	1.058441	1.058441	1.058441	1.058441
L-phosphogamma-lactone oxidase	1.6704863	1.1687533	1.1687533	1.1687533	1.1687533	1.1687533	1.1687533	1.1687533	1.1687533
Phase-1 RCT-33	1.3484479	1.2316489	1.2316489	1.2316489	1.2316489	1.2316489	1.2316489	1.2316489	1.2316489
C-Jun	0.74694705	0.752187	0.752187	0.752187	0.752187	0.752187	0.752187	0.752187	0.752187
Phase-1 RCT-233	1.2146927	0.97251328	0.97251328	0.97251328	0.97251328	0.97251328	0.97251328	0.97251328	0.97251328
Phase-1 RCT-38	0.91034853	1.0313365	1.0313365	1.0313365	1.0313365	1.0313365	1.0313365	1.0313365	1.0313365
Phase-1 RCT-242	0.74517745	0.8567058	0.8567058	0.8567058	0.8567058	0.8567058	0.8567058	0.8567058	0.8567058
Phase-1 RCT-181	1.0245229	1.0217248	1.0217248	1.0217248	1.0217248	1.0217248	1.0217248	1.0217248	1.0217248
Phase-1 RCT-185	1.0661187	1.070547	1.070547	1.070547	1.070547	1.070547	1.070547	1.070547	1.070547
Phase-1 RCT-179	1.4217637	1.1413487	1.1413487	1.1413487	1.1413487	1.1413487	1.1413487	1.1413487	1.1413487
Phase-1 RCT-144	0.8628326	0.9512708	0.9512708	0.9512708	0.9512708	0.9512708	0.9512708	0.9512708	0.9512708
IL6-a	0.9655782	0.91616545	0.91616545	0.91616545	0.91616545	0.91616545	0.91616545	0.91616545	0.91616545
Phase-1 RCT-225	1.236395	1.1933484	1.1933484	1.1933484	1.1933484	1.1933484	1.1933484	1.1933484	1.1933484
60S ribosomal protein L6 (alternate done 1)	1.2897738	1.01772	1.01772	1.01772	1.01772	1.01772	1.01772	1.01772	1.01772
Beta-actin, class I	1.6603278	0.80514395	0.80514395	0.80514395	0.80514395	0.80514395	0.80514395	0.80514395	0.80514395
Multidrug resistant protein-2	0.9125143	0.9161108	0.9161108	0.9161108	0.9161108	0.9161108	0.9161108	0.9161108	0.9161108

Table 28

Phase-1 RCT-48	1.3326769	1.0930429	1.3702456	1.5652138	1.9354672	1.9996404	0.8570986	0.88131547	3.5507123	0.97755208
Cdk2/p134	1.0382159	0.9700677	1.0875949	1.1618257	1.6575667	1.4549432	1.0131752	0.9807688	1.9810927	1.3910927
NADP-dependent isocitrate dehydrogenase, cytosolic	1.3431143	1.0978159	1.0356853	1.10727	1.2375881	0.81557596	0.7662702	0.8016474	0.78974806	0.7878787
Oxalate binding protein 1	1.1481624	1.1030823	0.8144516	0.8771966	1.025341	0.9306244	0.6759053	0.8747213	0.89532937	1.0496004
Sodium/leucine acid cotransporter	0.853996	1.1589404	0.9728417	0.825328	1.0542131	0.812742	0.6198344	0.5913997	0.8335502	0.84255934
Phase-1 RCT-174	0.7804074	0.9746158	1.1420289	1.021726	1.044646	1.0526043	1.0463915	1.0275607	1.0334953	1.069151
Phase-1 RCT-77	1.2023578	1.1478632	0.88134193	1.1596488	0.93966974	0.975468	0.8240115	0.9105019	0.90051528	0.97218704
Inositol polyphosphate multikinase (IpMK)	1.4835521	1.042209	0.8900498	0.93351684	0.63474375	0.5555585	0.66934707	0.55915906	0.74515447	0.848188
Phase-1 RCT-236	1.2204366	0.99238604	1.1650034	2.0951689	0.81424063	0.67850913	0.8008173	0.8144337	0.63242716	0.5620525
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.8080819	1.0728408	0.7312238	1.0191307	0.7873164	0.7540149	0.4894772	0.7078897	0.71273856	0.69023306
CDK102	1.0632249	1.0899874	1.0144035	0.9684398	1.2064126	0.94932514	0.8727229	0.9536306	0.9048108	0.70368734
Phase-1 RCT-209	0.7647952	0.9375618	1.1178647	0.837638	0.940838	0.7136849	0.765191	1.0169422	1.0770056	1.1422387
NADH-oxochrome b5 reductase	1.1573391	1.1002581	0.8142698	0.8314309	0.925293	0.74879706	0.6924385	0.7222185	0.5334879	0.5435898
Dynamin-1 (D100)	0.845993	0.963396	1.1475708	0.9417752	1.1772211	0.7987314	0.5110335	0.7390043	0.8335518	0.83038735
Senescence marker protein-30	1.2686149	0.87245264	0.8535687	1.0589164	0.82618725	0.7864495	0.6048464	0.8298254	0.8070969	1.0694308
Phase-1 RCT-89	1.120274	1.0300634	0.6329765	1.135876	1.0348824	0.77379805	0.5787435	0.69809766	0.7646036	0.81335163
Carbamate peptidyl-CoA transferase	0.98035085	0.98262528	0.929016	0.8244926	0.8219018	0.6073698	0.4085522	0.5920569	1.1736177	1.4513568
Alpha-2-microglobulin	1.7465287	0.69762988	0.75222	0.748655	0.5961143	0.94840813	0.16972005	0.2630583	0.8026555	1.3682715
Acyl-CoA oxidase 2	1.1281071	0.99082303	1.0819147	0.748655	0.81021885	0.6265475	0.5124673	0.6200687	0.8401558	0.82839155
Calpain L, sequence 2	1.1563908	1.2030499	0.6398752	1.1254956	0.8209748	1.8321316	2.8458443	1.6459104	0.85583673	1.2842411
Phase-1 RCT-141	0.955449	1.1784306	0.3481505	1.250702	1.703169	1.1956176	1.7548942	1.4083269	1.34149	1.1881922
Phase-1 RCT-289	1.2110971	1.055129	0.88254917	0.7546173	0.9633701	0.8448507	0.6372736	0.6984938	0.7026874	0.6840134
Ethanol/ethanol	0.8634488	0.8955174	0.95199713	0.86451908	0.9158465	0.9549893	0.7714788	0.8685653	1.1214359	1.0970753
Phase-1 RCT-282	0.7980395	1.0138764	1.1533077	1.1053216	1.0025903	1.0678959	0.88197263	1.0470735	1.079393	0.9444048
Phase-1 RCT-140	0.83317925	0.9918556	0.9518844	0.90357155	0.84786748	0.8796428	0.9739895	0.97469914	1.1447764	1.104337
Cyclin D1	0.928138	1.541773	0.8559404	0.93666893	0.91471	1.8202318	1.8302007	1.8376303	1.087484	1.3057003
Phase-1 RCT-281	0.7773969	1.1116906	0.8516275	0.9117374	0.9388854	0.92699504	0.9542704	0.9782192	0.8851885	0.8813375
Retinol-binding protein (RBP)	1.2274399	0.9472982	0.7426389	0.85068116	0.89331208	0.8670477	1.0102143	0.86578083	1.1922078	1.3463521
ATP-stimulated glucocorticoid receptor	1.2147807	1.0771792	0.8312663	0.87310284	0.7517989	1.0256823	0.8425573	0.8403368	1.0074106	1.0548973
transcriptional promoter (GV6)	0.8020202	0.8126151	0.7132093	1.1360582	0.9352956	0.83607674	0.6553656	0.80801034	1.1992308	1.1586262
Phase-1 RCT-60	1.0279002	1.0281534	1.0881787	1.0493392	1.2613848	1.4781488	2.0282765	1.4118925	0.9386832	1.0161315
Pyruvate kinase, muscle	1.2499297	1.1480552	1.0774521	1.0461551	1.4214342	1.6428088	2.2181032	2.1698622	0.8044874	0.80927736
PAR interacting protein	1.0427082	1.0018455	1.0523693	0.979998	1.1271478	1.2514662	1.6109548	1.1780342	0.9517287	1.8909643
Nucleoside diphosphate kinase beta isoform	1.2285272	1.2170374	1.4073727	1.4542128	1.516178	1.802188	2.390627	1.9011159	1.0688402	1.0867051
Gadd153	1.0377822	1.0283177	0.7105704	0.7239225	0.9012818	2.859048	4.2659848	3.3898818	1.6213019	1.3283073
Insulin-like growth factor binding protein 1	0.9117708	0.92429423	0.78827626	0.7984562	1.2245544	1.4225075	1.6904492	1.9052514	1.1220309	0.8957877
c-H-ras	1.1201024	1.0224457	0.68811305	0.8430381	1.1584265	1.2223715	1.3737329	1.2664496	1.2512568	1.3148822
N-Hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.9530183	1.2692161	0.81475675	1.0025032	0.7438684	0.6638923	0.37748814	0.44069186	0.73417765	0.79400456
Phase-1 RCT-52	1.1908933	1.0672785	1.3113102	1.2300471	1.0770789	0.882542	0.7555132	0.63098	0.74841535	1.0390056
Alpha 1 - inhibitor III	1.3428322	0.874452	0.5270844	0.4977887	0.4518126	0.4707684	0.32891822	0.43591785	0.5728379	0.6374714
Stem cell factor protein 2	1.308828	1.051528	0.9149887	1.2115195	1.2583473	0.8408293	0.74801823	0.92560416	0.67854717	0.816357
Organic anion transporter 3	0.9134987	1.4680489	0.7498769	0.75921434	0.921734	1.0507448	0.6934789	0.787854	1.2942573	1.216386
Calgranulin B4	2.3256223	1.1197827	1.215807	0.90960745	1.2023371	0.77291226	0.70174783	0.67943585	0.95748824	1.1108873
Phase-1 RCT-182	1.0449928	1.0344663	0.6763788	0.808018	0.6001697	0.8337055	0.5663141	0.6692163	0.78300505	0.9748995
Calgranulin B8	1.2083371	0.9791808	0.5150322	0.7691277	0.60072106	0.7817684	0.69375228	0.77278525	0.65943988	0.54369626
Adenylate dehydrogenase, mitochondrial	1.1776002	1.683462	0.888641	0.7940079	0.88464038	0.9071546	0.71473768	0.6689016	0.9889172	0.9337868
Phase-1 RCT-128	1.2891512	1.0042634	0.988745	0.9208751	1.2506062	0.7659346	0.3552084	0.5862388	0.84289184	0.98925685
Phase-1 RCT-102	1.322002	1.1873782	0.58225375	0.709841	0.5928305	0.4328129	0.29044306	0.35622436	0.4448768	0.4997048
Preproalbumin, sequence 2	1.3168972	0.9708351	0.8504032	0.6189859	0.6632786	0.6398883	0.45151454	0.7372877	0.9134773	0.9269916
Acyl-CoA oxidase 1	1.2039306	1.597223	1.8019375	1.429499	4.7399087	0.8364306	0.34298378	0.4222446	0.73739253	0.7664845
Phase-1 RCT-10	1.258766	1.0892377	0.758666	0.8314262	0.6958261	0.83828486	0.73579681	0.63160016	0.73415947	0.89734884
Phase-1 RCT-48	1.2530143	1.0121841	0.8351129	0.8958286	0.848932	1.0240002	0.804838	1.1131778	0.7488877	0.6821268
Phase-1 RCT-18	1.1403376	1.0737125	0.85854167	0.8622455	0.7452846	0.83336307	0.49350047	0.44418344	0.7397583	0.89495647

Phase-1 RCT-168	1.0882225	1.1304532	1.1725398	1.0275257	1.3379147	0.77827434	0.72128046	0.6865891	0.74748283	0.81622715	0.8237702	0.7336245	0.85967569
Phase-1 RCT-169	0.78935226	0.9494334	1.3276424	0.98452076	1.8726121	0.80070271	0.80075643	0.70785286	1.0077969	0.89750023	1.0005672	0.90780105	0.9213546
Beta-actin synthase	1.0541976	1.0869268	1.0400777	0.9246523	1.8216412	0.6981871	0.71824604	0.7618927	1.0631396	0.8317578	1.0803881	0.36549032	0.91060585
Phase-1 RCT-266	1.5378462	1.1817225	0.9296969	0.633469	0.6629885	0.801514	0.34760885	0.42772046	0.7789617	0.8406588	0.7789617	0.037999532	0.21200365
Carbonic anhydrase III	1.1638929	1.0423691	0.8659056	0.5319881	0.7357204	0.48888078	0.14671153	0.24202245	1.1452497	0.6406588	0.7789617	0.037999532	0.21200365
Phase-1 RCT-291	1.2189777	1.0985863	0.7396657	0.95933865	0.8441966	0.8281288	0.7629834	0.770144	0.8211449	0.7859808	0.8132478	0.5017113	0.8578391
Carbonic anhydrase III, sequence 2	0.920651	1.3402158	1.1584333	0.71155464	0.5553447	0.8525404	0.79353143	0.6115438	0.8881813	0.9839816	0.9804057	0.33851227	1.2537147
Phase-1 RCT-271	1.2564017	1.2406162	0.76485295	0.7788168	1.4595602	0.9424717	0.9339378	0.9192929	0.77206373	0.8567678	0.7872992	0.54137397	0.7308545
FMG-CoA synthase, mitochondrial	1.18982	0.9597344	0.622182	0.54074156	0.76707125	0.8464888	0.36911753	0.65953545	1.1216687	0.9945959	0.9201164	0.8214524	0.8401086
Phase-1 RCT-189	1.1095145	1.081937	0.8649894	0.8594845	1.1802347	0.86126	0.8328738	0.943198	0.8211058	0.8252744	0.8487488	0.62081665	0.8340837
Phase-1 RCT-140	1.0527613	1.1394555	0.782522	1.1178788	0.7082266	0.65592388	0.4646634	0.56003076	0.8784584	0.5615355	0.56256294	0.48403543	0.4930857
Urinary protein 2 precursor	0.86472225	0.9305126	1.0367287	1.2821177	0.6333593	0.8162993	0.40030852	0.7180267	0.5923005	0.746118	0.6268658	0.2610068	0.42824608
Paraoxonase 1	1.294318	0.8785815	0.680378	0.918798	0.706816	0.3722031	0.37425998	0.47814494	0.657188	0.5937188	0.7570005	0.37583095	0.5807834
Uterine fatty acid binding protein	1.0276881	0.8224395	0.6948953	0.81774014	0.7168916	0.5162283	0.37425998	0.47814494	0.657188	0.5937188	0.7570005	0.37583095	0.5807834
Phase-1 RCT-38	1.3465599	0.8424528	0.51598895	0.4399325	0.45518765	0.5162283	0.37425998	0.47814494	0.657188	0.5937188	0.7570005	0.37583095	0.5807834
Phase-1 RCT-270	1.1581867	0.8893149	0.8614677	1.1112626	0.9753243	0.75145286	0.681133	0.8089179	0.6005413	0.6170121	0.67082584	0.43994397	0.880101
Transferrin	1.403988	0.9555659	0.7550668	0.75157666	0.6570805	0.81281413	0.7105103	0.71934247	0.7251484	0.73004176	0.7257287	0.30942386	0.7188482
Cytochrome P450 11A1	1.3673004	0.88138473	0.6311055	0.5103184	0.5798006	0.50362486	0.36720893	0.56253655	0.6311048	0.7395544	0.7257287	0.30942386	0.7188482
Phase-1 RCT-117	1.5903503	0.98035944	1.240237	1.2621064	0.9010488	0.45359161	0.45359161	0.45359161	0.38419172	0.50467336	0.38989338	1.0173372	0.6300731
Phase-1 RCT-117	1.2391851	1.1901232	0.8045528	0.8178895	0.74328566	0.36720893	0.56253655	0.6311048	0.7395544	0.7257287	0.30942386	0.7188482	0.6300731
Phase-1 RCT-117	1.5328485	1.2714103	0.947007	0.9595955	1.0444139	0.78553336	0.80884365	0.8133885	0.8214827	0.82739546	1.0057129	0.95116878	0.76181913
Phase-1 RCT-117	0.7888351	0.9487007	0.8624436	0.9595955	1.0444139	0.78553336	0.80884365	0.8133885	0.8214827	0.82739546	1.0057129	0.95116878	0.76181913
Phase-1 RCT-12	0.9954492	0.94528855	0.8918211	0.9785768	1.2959698	1.5911572	2.085646	1.9405565	1.3455988	1.1223366	1.2873701	1.9253509	1.1359744
Phase-1 RCT-152	1.1325012	1.1412129	1.1489742	1.3359917	1.6576998	1.7688012	2.2040083	1.7363951	0.83053005	0.8744034	1.7552665	1.6590814	1.3859208
14-3-3 zeta	1.1481848	0.88901204	0.7335742	0.9097308	1.0473813	1.6601833	1.9235764	1.7595764	1.509641	1.5396113	1.8436518	1.1644213	1.3859208
Cytochrome P450 2C23	1.5966237	1.1035984	0.45114893	0.8280049	0.9037476	0.66955054	0.5320421	1.7924318	0.73647386	0.81593544	1.20914368	0.7604168	0.8349869
Voltage-dependent anion channel 2 (Vdac2)	1.4007715	1.1130731	1.1257282	1.1251417	1.3872546	1.511794	0.9423338	1.5792417	1.1439148	1.1804931	1.7048164	1.5465922	1.4137173
Superoxide dismutase Min	0.9438074	1.0015068	1.2774769	1.0318981	1.025087	1.7960592	2.0882967	1.4901533	1.0600232	1.0306317	1.1087126	2.1555862	1.4137173
Phase-1 RCT-154	1.04525	1.1474055	1.0680474	1.3737698	1.2037685	2.0185843	2.8876095	2.311271	1.1438039	1.0806027	1.414644	2.9548874	1.5180119
c-myc	0.7356411	1.0009671	0.8956641	0.83408993	1.0036646	1.7368491	2.5799986	2.16114	1.224028	1.085965	1.048427	2.808735	1.0245543
Phase-1 RCT-166	1.0791878	1.0669286	1.2242678	0.9763631	0.8964793	1.505811	1.7607065	1.336197	1.0541176	1.0710687	1.0562623	0.8302583	1.0165531
Cytin G	0.9861055	0.9710991	1.272708	1.186846	1.1612	2.0753772	3.015346	2.5912278	2.8893007	1.076805	2.3467317	2.421576	1.1573957
Calgranulin B5	0.860232	0.9578373	1.2400135	1.0838339	1.1412454	1.6527618	1.9831865	1.6307707	1.0432892	1.0657482	1.056954	1.5168521	1.0407454
p53	1.528194	0.94331497	0.8390218	0.85435645	0.8701474	1.2743765	1.8323931	1.2273807	0.9881423	0.9538426	0.8721052	1.4908071	1.3248442
Phase-1 RCT-205	0.9525448	1.002539	1.2727259	1.3401894	0.9893773	1.2626331	1.7128332	1.2385712	0.8433959	0.83393685	0.84784234	1.5378289	1.2091863
Phase-1 RCT-48	0.876555	0.9694255	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602
Caspase 3	0.7898345	0.8986336	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602	1.1723602
Alpha-tubulin	1.8731143	1.1238756	1.2289757	1.2157736	1.6148502	1.6296145	2.339932	1.787017	1.1394763	0.9942276	1.2405869	1.4845143	0.8398846
Ribosomal protein L13A	0.961248	0.9507094	1.1807262	1.0965607	1.209073	1.4629867	1.6332285	1.9092027	1.0612388	0.8486543	1.048334	2.8061671	1.8013763
IgE binding protein	0.7832122	1.0163554	1.5408668	1.0981323	1.5237262	2.3807302	2.453382	2.3325307	0.9288111	0.8124182	0.9337703	4.9149375	1.875745
Phase-1 RCT-39	1.1731839	1.0073216	0.8664179	1.0970319	1.0510753	1.3218073	1.5532203	1.2589144	1.1335663	0.8904947	0.8566365	1.3684326	1.2872132
Cofilin	1.258176	1.001616	1.0721028	1.1750342	1.0661878	1.4253789	1.7304277	1.5337362	0.8405036	0.8904947	0.8566365	1.3684326	1.2872132
Heme oxygenase	0.804184	0.9758365	1.1733422	1.051226	1.0670377	1.1618763	1.7323387	1.208828	0.9534594	1.0059895	0.9790716	1.2809565	1.1504553
Phase-1 RCT-241	1.7402263	1.1375246	1.096667	0.8357224	0.8124188	1.2346561	1.9368812	1.6728492	0.9607114	0.9740847	1.0761544	1.8100864	1.125705
Ribosomal protein S9	1.0018185	0.9843425	1.2037048	1.0627468	0.898098	1.1403744	1.4558007	1.2218895	0.8607693	0.98033535	1.6582548	1.3462856	1.4516883
Phase-1 RCT-258	1.6788581	1.1152531	0.80629658	0.8250712	0.902005	1.033005	1.3004638	1.378132	0.93139505	1.0926203	0.927073	1.5412409	1.4006393
Argininosuccinate lyase	1.770806	1.0236853	0.9059568	0.8250712	0.902005	1.033005	1.3004638	1.378132	0.93139505	1.0926203	0.927073	1.5412409	1.4006393
Phase-1 RCT-180	0.9309531	0.87381035	0.74256665	0.77533877	0.68189296	1.009704	1.2287628	1.5142168	1.4534425	1.7512414	1.8725535	2.6280218	1.513142
Multidrug resistant protein-1	1.4534361	1.0427188	1.0727961	0.9122623	1.009704	1.2287628	1.5142168	1.4534425	1.7512414	1.8725535	2.6280218	1.513142	1.513142
Omatidine decarboxylase	1.2378267	0.9584429	1.2107343	1.269455	1.0925539	1.4337312	1.8212468	1.6655378	1.8655275	1.0284693	0.8843588	1.0968594	1.7085971
Thymosin beta-10	1.1634801	1.0631162	1.0712374	1.0673303	2.18972	1.402858	1.5362656	0.8166294	0.9878065	0.927073	1.5412409	1.4006393	1.7085971
Phase-1 RCT-72	1.0412234	0.8876973	0.7847043	1.021802	1.2638826	0.8436388	1.0055728	0.6174431	1.1039344	0.9668123	1.214753	0.98535085	0.675215
Phase-1 RCT-76	1.0297737	1.0141358	1.1286033	0.8753307	0.9630072	1.0508928	1.3378157	1.0371903	0.8399437	0.9382167	1.0589337	0.8271189	0.8271189

Table 29

Phase-1 RCT-158	0.76747007	0.92414449	1.3106288	1.0876535	1.0529094	0.8715081	0.95771146	0.9494708	1.0828925	1.0686041	1.0578258	1.4086428	1.0482455
Phase-1 RCT-113	0.6948087	0.69716125	1.2434372	1.1046600	1.1951654	0.9422107	1.0633543	0.9253874	1.1617627	1.202199	1.2805778	1.6755138	0.9339672
Endogenous retroviral sequence, 5' and 3'	1.2908063	0.84354585	0.67319105	0.83263415	0.7410591	1.5203727	2.199482	1.6891419	1.5978376	1.1344993	1.4405288	1.1083918	1.911932
LTR													
Beta-actin	1.5665321	0.4525607	0.63355004	1.0248864	0.8814244	1.3508722	1.6152388	1.8209372	2.2156713	1.9706372	1.975018	1.9930058	2.1564196
Phase-1 RCT-65	1.0828404	0.9326208	0.728798	0.9002927	0.7595491	1.1004551	1.3844131	1.4342732	1.5458307	1.5591791	1.6128478	1.1251483	1.1012527
MHC class I antigen RT1A1(0) alpha-chain	1.0154325	1.1418623	0.7853284	1.118348	0.7837682	1.8345251	1.9832898	2.106563	1.7832168	1.6609424	1.8589104	2.2901735	1.4287757
Bax (alpha)	1.1650804	0.9752273	0.78715646	0.8345185	0.8658935	1.155853	1.7218331	1.6893425	1.4134742	1.2758568	1.3882053	1.384380	0.927784
Carboxyl reductase	1.1165915	1.053322	0.6911055	0.698458	0.7612382	1.3257778	1.5711792	1.4042662	1.125839	1.1323262	1.18223	1.689638	1.4748449
Beta-actin, sequence 2	1.3003388	0.87213624	1.598495	1.668788	2.1017482	1.3311931	1.6116711	1.5080129	1.1906937	1.118441	1.0889027	2.0851284	1.5415388
Infrared-10	1.023946	1.0228221	0.67891705	0.6789174	0.7277156	1.0756788	0.9467352	1.359238	1.1209007	1.1789844	1.1818944	1.269474	1.2901706
Phase-1 RCT-191	1.1393405	0.98501647	0.9112654	0.94189333	0.9386287	1.1923363	1.265228	1.3083432	1.1062282	1.1898993	1.1308348	1.8617877	1.2912173
Phase-1 RCT-111	1.068432	1.1241288	0.9627779	0.82715094	1.3880228	0.9587318	0.6798394	0.6797811	1.1690218	1.0772848	1.148818	0.88821086	0.7890444
Apoptosis-regulating basic protein	1.1268922	0.9080899	0.3962403	0.65888473	0.660563	0.7866523	0.68274047	0.72873424	0.48317074	0.48957288	0.5703267	0.32841935	0.53767204
Glutathione peroxidase	0.770281	0.9328892	0.9049058	0.8876559	0.9455234	0.71289515	0.45468527	0.66574748	1.1297386	1.073292	0.9630342	0.85174987	0.82122004
Phase-1 RCT-67	0.702597	0.96841384	1.1479782	1.0807691	1.0837842	0.8487258	0.8090678	0.89461914	0.83778584	0.86141497	1.0857447	0.8840178	0.89408255
Tryptophan hydroxylase	1.0661994	1.1380566	0.8391579	1.1812868	1.2249673	0.89489185	0.81240287	0.75227576	1.121148	1.0546321	0.97086086	0.7832424	0.6888867
Sulfotransferase K2	0.9054714	0.9625181	0.631617	0.78853844	0.8096202	0.83510315	0.85428334	0.8942313	0.781384	0.77392834	0.7518116	0.806812	0.9095045
Calgranulin B9	0.8443567	0.9932353	0.6370788	0.9950447	0.69363785	0.99599894	0.828798	0.8936751	0.97156568	0.9891803	1.0204787	1.475787	0.8578985
Phase-1 RCT-123	0.8202168	1.0412254	1.302592	1.105439	0.9863829	0.9176123	0.87284933	0.8936751	0.92847773	0.95789904	0.89197335	0.8344212	0.74557084
Phase-1 RCT-68	0.81079878	1.0078657	1.064783	1.026656	0.9441257	0.82955104	0.7072213	0.7700183	0.82847773	0.95789904	0.89197335	0.8344212	0.74557084
Aquaporin-3 (AQP3)	0.80944425	1.0459888	1.2854731	1.0832825	1.03031	0.8975092	0.7602249	0.7898818	0.86519146	0.969038	0.97889714	0.8683586	0.82045597
Stearyl-CoA desaturase, liver	3.3199298	1.9952987	0.6088597	0.5114485	4.8588034	0.45643868	1.4607037	0.9023285	0.15680874	0.1288412	0.050787628	0.1729248	0.17397204
Phase-1 RCT-64	1.1631393	1.0693438	0.86515226	1.0249578	1.2659922	0.9037228	0.864183	0.9504464	0.8649787	0.9431895	0.8448669	0.42719817	0.7748035
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 hr: yes-no,													
necrosis observed; yes-both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 2b)													

Table 29. Expression Data for 24 Hour		Timepoint (1)											
Compound/Dose (2)	Animal Number (3)	CHL3 250	CHL3 500	CHL3 600	CHL3 750	CHL3 1000	CHL3 1250	CHL3 1500	CHL3 1750	CHL3 2000	CHL3 2250	CHL3 2500	CHL3 2750
Liver Toxicity Inflammation Classification (4)		no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)		no	no	no	no	no	no	no	no	no	no	no	no
Gamma-actin, cytoplasmic		4.828458	1.6725786	3.1347418	2.8372986	1.066708	1.033732	1.692148	1.403113	1.029407	0.8282655	0.8338789	0.78382444
Phase-1 RCT-145		1.9688824	1.2414786	1.897154	2.0073514	1.0311143	1.0465523	1.240423	1.1851947	1.133658	1.0370014	0.971588	1.025661
Gad45		1.6548092	1.0283352	1.6085598	2.0979147	0.8866619	0.90123826	0.72409608	0.9829873	1.5217386	1.147868	1.2180966	0.76186764
Phase-1 RCT-78		0.72442687	0.952624	0.8040589	1.0628641	0.8607835	0.8622828	1.0011305	1.2771681	0.9451056	1.076718	1.0238378	1.0473106
Fas antigen		1.1577528	1.3983478	2.486255	1.1930344	1.658886	1.4236131	1.8038429	3.0106614	2.3659372	1.3331888	1.0959443	1.3769305
Macrophage inflammatory protein-2 alpha		2.8865595	1.8478957	2.010488	2.9652014	1.0882816	1.0405559	1.0068004	1.5919212	1.0074861	1.5734266	1.0764753	0.9052038
Interferon beta1		2.2870977	1.3405927	1.9414345	2.4737737	1.7870491	1.4780182	1.4246706	1.648527	2.685007	0.8455774	1.1434082	1.148493
Phase-1 RCT-207		2.3826344	1.4818077	2.2580776	2.4890095	1.276891	0.8995185	0.85927518	1.0302753	1.1152637	0.6151757	1.2079322	0.927272
Aspartate aminotransferase, mitochondrial		0.7819455	0.8758948	0.9673176	1.1045349	1.132524	1.1630348	1.2184283	1.0917028	1.2045925	0.5432952	0.7601278	0.98910244
Caspase-1 alpha		1.038066	0.86618453	0.80929303	1.104229	1.132524	1.1630348	1.2184283	1.0917028	1.2045925	0.5432952	0.7601278	0.98910244
Malic enzyme		1.3526012	0.5550652	0.8284536	0.8201949	0.88925637	1.2504028	1.0745014	0.785842	1.1842564	0.60837005	0.9787444	0.8288068
Phase-1 RCT-30		0.8101216	1.1053045	1.0978612	0.6093361	0.8858861	1.8773174	0.8833101	0.5186566	0.8657561	1.8213269	1.1627893	0.9633955
Hexokinase growth factor receptor		0.6208825	0.83275414	1.0978612	0.6093361	0.8858861	1.8773174	0.8833101	0.5186566	0.8657561	1.8213269	1.1627893	0.9633955
MAP kinase kinase		1.0850257	0.904019	1.3512853	1.1078458	0.99105287	0.7745063	0.93453928	1.3151836	1.0814238	0.6182756	1.0432774	1.0488414
Sodium/glucose cotransporter 1		0.9850372	1.5092825	0.62315273	0.6479125	0.7971151	0.40974495	0.49617162	0.3312623	1.2476827	0.43478703	0.8418145	2.711578
Phase-1 RCT-50		1.5215845	1.0288959	1.4064637	2.2622712	1.0640138	0.992173	1.227109	1.1130336	1.4127111	1.238596	0.8719983	1.1145889
Phase-1 RCT-288		1.7472245	1.1747884	1.4568009	1.1726967	1.0165868	1.1344378	1.0382821	1.2013733	1.2925192	0.8920764	0.84428716	0.98125815
Phase-1 RCT-37		0.4452569	0.7695808	0.8038634	0.50438693	1.35154	1.3518984	1.293204	1.2750105	1.0913733	0.73066074	0.84428716	0.98125815
Organic cation transporter 3		1.9419141	1.5973807	1.8748228	1.6760845	0.870505	0.85923517	0.87405425	0.8580075	1.536637	1.1340243	1.0140313	1.073987
60S ribosomal protein L6		2.4066107	1.6914116	1.9114324	1.6833869	0.9892294	0.9724997	0.89201264	0.82381026	0.90519595	1.3248111	1.0002985	0.97169894
Zinc finger protein B2		0.78117288	0.8373834	0.7911561	0.618103	0.8531328	1.0585876	1.044119	1.0288778	0.6454691	0.8345485	1.0186909	0.8898045
Id-1		2.3010168	1.2042308	1.5518472	1.8843287	1.4431463	1.2833875	1.1401483	0.8841939	1.0948187	0.75789024	0.8846339	0.90143013
Phase-1 RCT-92		0.4621187	0.78959533	0.57479495	0.6212498	1.076373	1.7589822	1.3974394	1.353083	1.463454	1.004721	1.5905073	1.1743553
Phase-1 RCT-115		0.40199238	0.97000474	0.60128505	0.4644135	1.5895839	1.9299235	1.5319087	1.3870157	1.3103834	0.9438646	0.9101452	1.221067
MafK		1.1651221	0.8987826	1.1518579	1.0254358	0.7676491	0.83006656	0.46534222	0.631445	1.4006207	1.381848	1.0200714	1.0022218
Phase-1 RCT-78		1.2374687	0.9409115	1.103902	0.94365154	1.1363944	1.069921	0.9710897	0.96159565	1.0008715	0.8672888	1.0711187	0.9655905
Sorbitol dehydrogenase		1.3523139	1.277061	1.3675923	1.1634517	1.5032235	1.5885605	1.203288	1.1805844	1.3319155	1.3374567	1.0341195	1.2145492
Phase-1 RCT-24		1.9725558	1.0084907	1.7689823	1.3881093	1.2016171	1.3911394	1.5304476	1.473923	1.1238696	0.96591234	0.89261814	1.1485138
Calgranulin B1		1.633775	1.2405835	1.49404	1.0302683	1.2654531	0.9527018	1.1029239	0.712464	0.79067053	0.6304353	0.81517805	1.152295
Elongation factor-1 alpha		1.7153046	1.3815624	1.3516875	1.5530416	1.2809374	1.8286893	1.0194757	1.0674201	1.3282844	0.6218647	0.5810555	0.8005467
Lacton-gamma-lactone oxidase		0.59476393	0.81788185	0.4984276	0.27234334	1.0816144	1.0740836	1.050585	0.9927216	1.0857751	0.87538505	0.70147	1.0091028
Phase-1 RCT-33		2.2517326	1.7588394	1.7081951	1.7731827	1.7411708	1.3544905	1.6517637	1.3955567	1.7849728	2.2173843	0.87658	1.1460877
C-Jun		0.5168233	0.9861062	0.8084535	0.7044724	0.9882763	0.8006535	0.89500433	0.7730835	0.8623375	0.6834234	0.9101494	0.8180687
Phase-1 RCT-233		0.83482016	0.88911974	0.665628	0.48982456	1.0537292	1.087163	1.0812649	0.95693976	1.1193799	1.18202	0.85207665	0.10184898
Phase-1 RCT-242		2.2434483	1.0150152	1.2600362	1.5883508	1.2192568	1.1172447	1.2097231	1.1518385	1.0520346	1.2988644	1.0396639	0.95832443
Phase-1 RCT-181		0.7274394	1.027137	0.98358756	0.8832983	1.0045928	1.0409751	1.218898	1.2604249	1.2534215	1.031918	0.957369	1.0867357
Phase-1 RCT-185		0.5880247	0.6394927	0.4921462	0.51897197	0.74056995	0.9012877	0.7429608	0.6512878	0.6604155	0.58773988	0.8944245	0.5888641
Phase-1 RCT-179		2.0811687	1.3710091	2.244524	1.6881963	1.1526701	1.1315385	1.0255935	0.9074734	0.8176134	0.86381845	0.92516625	0.97168786
Phase-1 RCT-144		1.4678184	1.0791944	1.841862	2.381963	0.7659324	0.84385356	0.97571845	0.97845204	0.9817958	0.85532663	0.9575144	0.9703862
IKK-a		1.8576231	1.1632228	1.1811992	1.3578197	1.0526273	1.6075887	1.326232	1.5538621	2.0592947	0.5484151	0.72239715	0.9704386
Phase-1 RCT-225		0.4984452	1.603508	0.537821	1.6681315	1.6848756	1.1654366	1.146871	0.807595	0.48402348	1.0237489	0.7615722	0.9628685
60S ribosomal protein L6 (alternate clone 1)		2.2028622	1.6086928	1.5839182	1.5111103	1.0683833	1.1624311	1.1600356	1.5571465	0.9207555	1.0123564	0.99725368	1.045468
Beta-tubulin, class I		1.6753827	1.0757418	2.314277	1.4674935	0.8457782	0.8946962	0.8345172	0.8536087	1.3677133	0.5222045	1.1848013	0.8872803
Multidrug resistant protein-2		4.282751	2.902582	2.4494357	2.5084052	1.5861276	1.1946652	1.2312013	1.109738	1.733016	0.94017094	1.59345	1.091319

Table 29

Phase-1 RCT-49	2.171106	1.250805	1.7201018	2.7135532	0.97987837	1.0413764	0.9426289	0.9833307	1.0567831	1.0938528	0.787351	0.93878006	0.95185026
Calgranulin B3	1.9398004	1.2954516	1.8307228	1.8989784	1.4765483	1.0487964	1.1235648	1.2339338	1.1430113	1.2300918	1.154293	0.9979469	1.1335656
NADP-dependent isocitrate dehydrogenase	0.5407414	0.7419004	0.64528695	0.53778765	1.0906731	1.1320087	0.98007878	0.91455543	0.94477904	1.0605622	1.5760498	0.9050816	1.0377098
Cytosolic	0.90807426	0.85688516	0.74900126	0.87831305	1.1910448	1.0705073	0.86885534	0.78488185	1.3804557	0.91740996	1.044444	1.3104832	1.0299175
Chaperone binding protein 1	0.8446514	0.7918007	0.8304384	0.87758777	0.7849	0.83689075	0.3529743	0.35803064	0.36615904	0.78851103	0.86521303	0.65872674	0.8708533
Sodium/bicarbonate cotransporter	0.89091027	1.3083573	0.9837251	0.87758777	0.7849	0.83689075	0.3529743	0.35803064	0.36615904	0.78851103	0.86521303	0.65872674	0.8708533
Phase-1 RCT-774	0.89091027	1.3083573	0.9837251	0.87758777	0.7849	0.83689075	0.3529743	0.35803064	0.36615904	0.78851103	0.86521303	0.65872674	0.8708533
Phase-1 RCT-17	0.89091027	1.3083573	0.9837251	0.87758777	0.7849	0.83689075	0.3529743	0.35803064	0.36615904	0.78851103	0.86521303	0.65872674	0.8708533
Inositol polyphosphate multikinase (Imk4)	0.5101573	0.58313385	0.5135374	0.5135374	1.1576368	1.221213	1.0757322	0.9587731	0.9587731	0.9587731	0.9587731	0.9587731	0.9587731
Phase-1 RCT-266	0.3920282	0.6655482	0.38030937	0.30344102	1.7330086	1.8009348	1.5241872	1.4908304	1.5241872	0.5318754	1.152052	0.9915163	0.9915163
Equilibrative nucleoside triphosphate-sensitive	0.55851847	0.49598624	0.30207005	0.22751956	0.48801377	0.5556062	0.4352173	0.39977416	0.4352173	0.39977416	0.4352173	0.39977416	0.4352173
Nucleoside transporter	0.74193525	0.8206916	0.7183335	0.6016049	1.2135341	1.1985874	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338
CDK102	0.74193525	0.8206916	0.7183335	0.6016049	1.2135341	1.1985874	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338
Phase-1 RCT-209	0.74193525	0.8206916	0.7183335	0.6016049	1.2135341	1.1985874	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338	1.2301304	1.0371338
NADH-oxidochrome b5 reductase	0.63538766	0.69990155	0.5084694	0.37739784	0.70002043	0.9484368	0.9289236	0.7786739	0.80533063	1.114723	0.8485153	1.0052773	1.0230565
Dynamin-1 (D100)	0.6401172	0.8444392	0.8026268	0.78950316	1.2720165	1.0785752	0.98381015	0.7902838	1.114723	0.8485153	1.0052773	1.0230565	1.0230565
Senescence marker protein-30	0.28571784	0.7731023	0.12913058	0.0896802	0.93530968	0.776016	0.7185238	0.55802315	0.39178944	0.570138	0.94359547	0.88704372	0.90516204
Phase-1 RCT-89	0.762353	0.8087208	0.532439	0.4485516	0.8273984	0.776016	0.7185238	0.55802315	0.39178944	0.570138	0.94359547	0.88704372	0.90516204
Carbonyl palmitoyl-CoA transferase	0.8933945	0.8252126	0.7687724	0.8312542	0.9427384	1.1708144	0.89581895	0.59446206	0.53348154	0.28047796	0.50470682	1.7803784	1.3151957
Alpha-2-microglobulin	0.5402005	0.5449722	0.434246	0.3474565	0.74963476	0.44271663	0.70958406	0.59446206	0.53348154	0.28047796	0.50470682	1.7803784	1.3151957
Apoptoprotein Clll	0.7942825	0.7777447	0.7203525	0.8109008	0.8158238	0.68594104	0.7556593	0.89136003	1.03934003	1.03934003	1.03934003	1.03934003	1.03934003
Calgranulin L, sequence 2	5.1170008	2.444574	3.69196	2.763478	1.4888618	0.974178	0.97725224	0.8147193	1.3529702	0.9270976	1.214723	1.0773492	1.0177953
Phase-1 RCT-141	1.2638893	1.4728868	1.9433125	2.2583689	1.9273717	1.784948	1.0544218	1.8178947	1.2104533	1.6340156	4.048463	1.236011	1.5229833
Phase-1 RCT-289	0.8344774	0.8025783	0.76550816	0.6501392	0.7320583	0.81249917	0.65885516	0.58072176	0.7005904	0.58325925	0.79201216	0.9074307	1.0459832
Endothelin-1	0.89322045	0.8645367	2.4007933	1.0844664	1.000449	1.2844745	1.438778	1.2888235	1.2571071	2.010094	1.1383813	1.117821	1.1335326
Phase-1 RCT-282	1.058933	0.9578293	0.9718093	0.96337015	0.91248035	0.8286812	0.80064237	0.7650189	0.8487753	1.0564972	1.0583316	0.9574204	0.8504466
Phase-1 RCT-140	1.231878	0.9945283	1.2545766	1.3147918	1.4209918	1.0638681	1.1289424	1.3589631	1.1460073	1.2695005	1.0527865	0.9273884	0.94304726
Cyclin D1	1.3749748	0.8529594	0.87381047	0.9832928	1.2063714	1.355942	0.82284965	0.5531554	1.1460073	1.2695005	1.0527865	0.9273884	0.94304726
Phase-1 RCT-287	0.70109403	0.96124685	0.70885935	0.7295948	1.0307788	1.2014189	1.0034949	1.380811	1.3302016	1.0650374	1.4010142	1.0670789	1.0098993
Phase-1 RCT-281	1.0016257	0.9457883	1.0062927	0.9130943	0.2913182	0.85483993	0.7312929	0.6962252	0.8534765	0.9487918	0.9102704	0.8851565	0.81531936
Retinol-binding protein (RBP)	0.77480944	1.057912	0.90086085	0.82545646	0.5090976	0.68411443	0.5904668	0.5053927	0.6938275	1.1360341	0.854132	1.015434	1.015434
ATP-stimulated glucocorticoid-receptor	0.4400816	0.6137266	0.43754156	0.42798383	0.6039061	0.7948643	0.7533017	0.3636444	0.5701556	0.6376737	0.95063964	0.9287493	1.1748482
Translocation promoter (GYS)	1.5137877	1.0281873	1.3654495	1.4788381	0.8680577	0.8874514	0.8481272	0.7377868	0.9523878	1.0085512	0.9080872	0.9154597	0.9154597
Phase-1 RCT-60	2.168049	2.101238	2.93571	2.93571	1.0489942	1.0295482	1.112762	1.3712785	1.8185285	0.7651569	1.544617	1.6451802	1.6451802
Pyruvate kinase, muscle	1.3892258	1.0470545	1.8527643	1.8112822	0.79304454	1.0033088	1.0596166	1.0597555	0.92311573	1.023355	1.049854	1.0387074	1.0387074
PAR interacting protein	1.1105108	1.211217	1.6728065	1.1620573	0.9310227	0.91812164	0.98878676	1.3605321	1.1420627	1.1557337	1.6733311	1.0044122	1.0485855
Nucleoside diphosphate kinase beta isoform.	1.6915423	1.2855892	3.0381364	2.9541683	1.7389918	1.0445358	1.2607881	1.3025993	1.105625	0.8940916	0.94116515	1.2518166	1.6769141
Gadd153	2.9222531	1.3189442	1.884494	2.4675303	1.6317882	1.6031484	1.5776028	1.219103	2.0580611	0.81872094	0.8536801	1.4721028	1.6323174
Insulin-like growth factor binding protein 1	0.37688384	1.2015506	1.0392032	1.0117741	0.87525173	1.3131206	1.1289127	1.3904295	1.2986939	0.8330181	1.1742551	1.0280801	1.0280801
c-H-ras	0.30853784	0.26904226	0.13114235	0.15727775	0.50777173	0.5331641	0.47785357	0.4031989	0.4145576	0.4318642	0.786662	0.7561622	1.0482459
N-hydroxy-2-acetylaminofluorene	0.4295583	0.6032386	0.43783392	0.25337124	0.6764254	0.84142035	1.0350132	0.8180365	1.1423659	1.303334	0.8380112	0.8529959	0.8529959
Sulfotransferase (S11C1)	0.2984398	0.63249284	0.3787859	0.43370002	0.43020087	0.8532809	0.6721681	0.50520635	0.5383528	0.583702	0.9722624	0.7224589	0.6207206
Phase-1 RCT-62	0.6281517	0.6681748	0.6757504	0.49595124	1.2831088	1.2889535	0.928334	0.83175015	0.8180779	0.5624323	0.9427415	0.9616438	0.9547945
Sterol carrier protein 2	0.9893953	1.182246	0.786281	0.5140474	1.3175968	1.4536006	0.9788471	0.6802948	1.082787	0.5749381	0.6957008	1.7560377	1.4648012
Organic anion transporter 3	0.89133558	0.7128168	0.80028484	0.85588184	0.7448598	0.886693	0.88318785	1.0668906	0.8784125	0.88430985	0.9111136	0.9839418	0.8448431
Calgranulin B4	0.6933994	1.038103	0.6818375	0.8025111	0.7886284	0.8853326	0.8484109	0.88797593	0.84555814	0.770283	1.2042272	0.7678318	0.7665625
Phase-1 RCT-182	0.6128511	0.9300689	0.83077498	0.7457458	1.2478753	1.2638205	1.117343	1.205038	1.0037832	0.7758104	1.1082197	0.9651726	0.8771312
Calgranulin B8	0.56153538	0.7516701	0.76253	0.84973575	1.277926	1.0955907	1.0094622	1.068543	1.077802	1.0665804	1.150416	1.1214892	1.02848
Aldehyde dehydrogenase, microsomal	0.3823458	0.9420434	0.7316764	0.89277714	0.84434557	1.1015084	1.0157777	0.80331733	0.8764695	0.5434216	0.7183784	0.9893356	1.0083909
Phase-1 RCT-128	0.7425502	0.5413785	0.5204884	0.58277687	0.7922084	0.8434357	0.8632546	0.5806188	0.629148	0.84773207	0.52817404	0.9872804	0.7123037
Phase-1 RCT-102	0.47577742	0.9402708	0.7922084	0.58277687	0.7922084	0.8434357	0.8632546	0.5806188	0.629148	0.84773207	0.52817404	0.9872804	0.7123037
Preproalbumin, sequence 2	0.41571557	0.4027012	0.4879587	0.3216172	1.7484155	2.3054548	0.98887484	0.9276208	0.5764801	1.0747528	0.7676208	0.7676208	0.7676208
Apolipoprotein AII	0.56967735	0.8403671	0.849148	0.56286826	1.007099	1.035238	0.9566488	1.0531133	0.9348738	0.7970367	1.099778	0.8800505	0.860789
Phase-1 RCT-10	0.7713823	0.7941555	0.6070359	0.9775993	0.78842748	1.2008415	0.9452223	1.0503836	0.73353255	0.7065276	0.97632575	0.97632575	0.97632575
Phase-1 RCT-48	0.5460742	0.867228	0.889975	0.61659616	0.7436876	0.81092745	0.9416844	0.82108206	0.732091	0.5881783	1.1133372	0.730883	0.8195931
Phase-1 RCT-8													

Table 29

Phase-1 RCT-168	0.6214957	0.85984373	0.6615893	0.5681368	0.9644471	1.1974081	0.97638535	1.0983257	1.1980459	0.7025182	0.8263165	0.97617069	0.9521159
Phase-1 RCT-168	0.4764174	1.0582324	0.77100515	0.7260993	1.1475767	0.9766096	1.3402263	1.1951985	1.3873786	1.2513545	1.0347621	0.8982788	0.8407377
Phase-1 RCT-168	0.49489406	0.59309256	0.48302884	0.54631907	1.4529538	1.6164596	1.2965625	0.96613074	0.96613074	0.54631907	0.9765696	1.2848042	0.98283425
Phase-1 RCT-230	0.19931978	0.30217764	0.22438249	0.17061162	0.8860239	1.3135965	0.6687846	1.34677991	1.2111538	1.0185491	0.82945534	0.8459277	0.6070795
Carbonic anhydrase III	0.1007272	0.14827509	0.12439881	0.078786965	1.3108862	1.1384124	0.66818117	0.5592448	0.32823494	0.20818668	0.49278957	1.2009739	1.5361652
Phase-1 RCT-281	0.5617197	0.8611236	0.562176	0.55561763	1.0551342	1.1681826	1.0382669	0.82849396	0.89026033	0.93828637	1.2458768	0.8262837	0.7624245
Carbonic anhydrase III, sequence 2	0.42348588	1.2046717	0.7284644	0.8969132	0.92235886	0.82771367	1.1380287	0.83618287	1.1556429	1.0053387	1.1228882	0.9505983	0.7340287
Phase-1 RCT-271	0.6158222	0.4767678	0.5728626	0.45472336	1.4938351	1.0743576	1.15324	0.91678166	0.888857	0.92082286	0.7897346	0.8834405	0.8655503
HMC-CoA synthase, mitochondrial	0.6876073	0.7501668	0.5728626	0.45472336	1.4938351	1.0743576	1.15324	0.91678166	0.888857	0.92082286	0.7897346	0.8834405	0.8655503
Phase-1 RCT-189	0.6589597	0.7368508	0.5661494	0.4601131	0.6085519	1.0743576	1.15324	0.91678166	0.888857	0.92082286	0.7897346	0.8834405	0.8655503
Phase-1 RCT-40	0.2747284	0.4126889	0.40390002	0.5798843	0.44739625	0.47145523	0.53107695	0.47450685	0.53201011	0.484215374	0.8605966	0.7623483	0.8540801
Utricular protein 2, precursor	0.21266189	0.29882672	0.24623976	0.21334682	0.81917455	0.92875865	0.5202641	0.37434738	0.41184075	0.89539677	0.92011094	0.8357022	1.4576445
Paraoxonase 1	0.28633418	0.6240938	0.38583002	0.44492978	0.17188926	1.0791998	0.8868578	0.8529415	0.7815947	0.5801787	0.6714868	0.9288945	0.7858945
Phase-1 RCT-175	0.41291872	0.65618504	0.49117807	0.32855344	1.4207782	1.1768926	1.03938094	0.38319373	0.29881963	0.4684182	0.8672351	0.47406288	0.7814818
Phase-1 RCT-36	0.5247004	0.8135929	0.61454175	0.45353308	1.0843389	1.2404761	1.0791998	0.8868578	0.8529415	0.7815947	0.5801787	0.6714868	0.9288945
Phase-1 RCT-270	0.4018887	0.45556165	0.38814842	0.39830302	0.7022638	1.0791998	0.8868578	0.8529415	0.7815947	0.5801787	0.6714868	0.9288945	0.7858945
Transferrin	0.7085453	0.46004468	0.48241787	0.6304408	0.7185957	0.8227764	0.5628388	0.4684182	0.8672351	0.47406288	0.7814818	0.9288945	0.7858945
Cytochrome P450 11A1	0.7659088	0.92924464	0.8307279	0.6687768	0.24414672	0.93030338	0.3201232	0.49780225	0.8547704	0.8453227	0.9308322	0.8716523	0.94875324
Phase-1 RCT-17	0.4725038	0.6205985	0.49531174	0.7814674	0.93030338	0.3201232	0.49780225	0.8547704	0.8453227	0.9308322	0.8716523	0.94875324	0.94875324
Phase-1 RCT-137	0.6672357	0.93248135	0.8153182	0.7814674	0.93030338	0.3201232	0.49780225	0.8547704	0.8453227	0.9308322	0.8716523	0.94875324	0.94875324
Melanoma-associated antigen ME491	1.3781602	1.1710653	1.2268601	1.318987	0.67696705	1.0238414	1.0178986	0.80225015	0.82010853	0.7496445	0.9144024	0.9934285	0.9478773
Phase-1 RCT-12	1.2765582	1.0106765	1.5688204	1.318987	0.67696705	1.0238414	1.0178986	0.80225015	0.82010853	0.7496445	0.9144024	0.9934285	0.9478773
Phase-1 RCT-162	2.0910831	1.2810138	1.3480446	1.3524808	1.3524808	0.9678749	1.5040133	1.5475848	1.3681266	0.94236887	0.80747404	1.2143873	1.205223
14-3-3 zeta	1.8416531	1.212394	2.0705866	1.3541808	1.3524808	0.9678749	1.5040133	1.5475848	1.3681266	0.94236887	0.80747404	1.2143873	1.205223
Cytochrome P450 2C23	0.4660769	0.57598126	0.32476246	0.30310202	0.71391326	0.80007255	0.67533433	0.94989555	0.8327576	0.73612463	0.8885893	0.9197221	0.8271142
Voltage-dependent anion channel 2 (Vdac2)	1.6781572	1.1982428	1.3465896	1.0343394	1.5040062	1.2864656	1.3453301	1.27695527	1.2840881	0.789448	0.8135337	1.137225	1.1830573
Phase-1 RCT-154	1.7242924	1.3795067	1.5410916	1.662294	1.1497728	0.86636276	1.2215265	1.1662238	0.9980789	1.0050022	0.958887	0.9993956	0.9993956
Superoxide dismutase Mn	1.5704393	1.8049231	1.5720065	1.8577825	1.2448886	1.1202965	1.4254324	1.4128531	1.8017439	1.094141	0.8848535	1.5747628	1.5586021
c-myc	1.7830541	1.258595	2.162004	3.678985	1.2159842	1.0019632	1.3436788	1.1121221	1.182342	1.6878546	1.7287822	1.1620853	1.0162963
Phase-1 RCT-186	1.402073	1.0802692	1.3468215	1.5347892	0.87352155	0.48313334	0.65149765	0.84818716	0.53351545	1.0011816	0.9853811	1.3043832	1.1127079
Cyclin G	1.2865088	1.7635794	2.2098937	2.8959518	2.0284478	0.83548368	1.0905935	1.2311877	0.9744823	1.3104947	2.2622184	1.1818312	1.7081167
Cytochrome B5	1.3869592	1.0809461	1.1378187	1.1611143	0.9148908	1.0283021	0.968949	1.0234778	1.0392927	0.89401028	1.1161365	0.9418864	0.8328784
Phase-1 RCT-205	1.2712582	1.0334775	1.3105584	1.7258874	0.81014216	0.9596918	0.9565604	0.86833834	1.352027	1.2501887	1.1098714	0.9460027	1.0381862
Phase-1 RCT-68	1.289751	1.235216	1.7443765	1.3422408	1.2381139	1.0250171	1.1526634	0.9882184	1.4533911	1.1268716	0.7667105	1.1600553	1.2895753
Caspase 3	0.8655996	0.88519253	0.9413176	1.1898008	0.75361808	0.8819218	0.68845596	0.8882184	1.4533911	1.1268716	0.7667105	1.1600553	1.2895753
Alpha-tubulin	1.3164428	1.0752157	1.096357	1.179667	1.1382895	1.3612238	1.221916	1.2862197	1.3444145	0.88384227	0.9471473	1.1435415	1.1373978
Ribosomal protein L13A	2.2113428	1.6660881	1.830172	1.5859555	1.8261197	1.5323265	1.3266055	1.8739731	1.808224	0.6894468	0.8851787	1.638532	1.5070733
gG binding protein	2.0075607	1.9184984	1.7290066	2.2816997	0.9575979	1.2433645	1.3496228	1.2329196	0.977197	1.202345	0.8148161	1.0462023	1.248985
Phase-1 RCT-39	1.7218309	1.3727522	1.3087801	1.2684821	1.6215598	1.4115503	1.3496228	1.2329196	0.977197	1.202345	0.8148161	1.0462023	1.248985
Cofilin	1.2163618	1.2784184	1.2888422	1.1379477	0.802887	0.8435684	0.96840533	0.8986427	0.8986427	0.8986427	0.8986427	0.8986427	0.8986427
Heme oxygenase	2.2270393	1.4161971	1.9007862	4.472455	0.8944517	0.7028009	0.7304468	0.80570436	0.64940417	1.5475765	0.8510598	0.9372743	0.7161878
Phase-1 RCT-241	1.5093951	1.2494702	1.4005688	1.8080331	0.7257883	0.73250955	0.7304468	0.80570436	0.64940417	1.5475765	0.8510598	0.9372743	0.7161878
Ribosomal protein S9	1.1839602	1.3214	1.8653782	1.584285	1.062682	0.985078	0.9353327	1.128812	0.95940274	1.170006	0.9807834	0.992701	1.0546091
Phase-1 RCT-258	1.7928323	1.4302068	1.5394285	1.584285	1.062682	0.985078	0.9353327	1.128812	0.95940274	1.170006	0.9807834	0.992701	1.0546091
Argininosuccinate lyase	1.8944308	1.376382	1.861319	1.3540685	1.1580272	0.80881697	1.1280862	0.81045693	0.7525506	1.103141	0.90897445	0.9187176	0.8858473
Phase-1 RCT-180	1.5051448	1.2572634	1.8287834	1.7213008	0.98618616	0.94893565	0.97155553	1.038763	0.94594771	1.6228701	1.5380939	1.0831908	0.9102021
Multidrug resistant protein-1	4.234022	0.4814487	3.455861	0.5688853	1.7220882	1.6474925	0.9830111	1.5504704	1.8396741	1.0010831	1.8831203	1.1871768	0.742881
Omitline decarboxylase	1.4205314	1.1245701	4.25575	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258
Thymosin beta-10	1.8628675	1.813572	1.674857	1.5710407	1.499228	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258	1.2739258
Phase-1 RCT-72	1.9403309	1.3332051	1.3714188	1.3946064	1.135681	1.0744566	0.9894031	0.8994031	0.8994031	0.8994031	0.8994031	0.8994031	0.8994031
Phase-1 RCT-109	1.8651091	1.60208	1.3969826	1.529359	1.445845	1.1852008	1.0831156	1.033141	1.2159632	0.6416536	0.7212179	1.2153028	1.4858807
Phase-1 RCT-76	0.91591884	1.0212308	0.82519826	1.1879162	1.135248	0.9651572	0.8284944	0.96766827	0.6727446	0.6888051	0.8622783	0.9822163	1.028807
Vacuole membrane protein 1	0.948192	1.2173618	1.1015438	1.5294667	0.7621768	0.46128958	0.48843452	0.44128874	0.48827126	0.6788094	1.1652225	0.5837638	0.74942803

Table 23

Phase-1 RCT-168	2.2872322	1.0703703	1.4016111	1.584024	1.0344343	0.8583261	0.9348846	1.0812653	0.7783774	1.5613852	0.99735534	1.030472	1.1858664
Phase-1 RCT-113	1.2038136	1.2971843	1.1808667	1.5307461	1.0099742	0.84838414	0.89861076	1.0358517	0.7841001	1.1118205	1.0426553	1.0100263	1.0588847
Endogenous retroviral sequence, 5' and 3'	1.8804286	1.8804286	0.84681493	1.4088309	0.7794915	1.4570918	1.1854516	1.2431531	1.539076	0.50623467	0.56461406	1.2685239	1.4342458
LTR													
Beta-actin	2.975467	1.825167	3.8749194	1.2742553	1.8392432	1.0905865	2.2815988	3.8257785	2.5394576	0.65543354	0.88679195	1.0397253	1.5638649
Phase-1 RCT-65	1.1493808	1.298894	1.2058174	0.9630986	1.4116538	1.4356123	1.1785527	1.1819371	1.115887	2.0978778	0.94284207	1.0492948	0.8185152
MHC class I antigen RT1.A1(0) alpha-chain	1.831302	2.0193954	2.7152183	1.2954053	1.8512289	1.1982244	1.283734	1.0478708	0.94008376	4.6248874	1.0354873	1.0349331	0.9016788
Bax (alpha)	0.9587475	1.1494725	1.1948808	1.2294695	1.8221621	1.1697836	1.5258851	1.19383531	0.8819819	1.568778	1.0283289	1.2830487	1.1189355
Carbonic dehydratase	1.681004	1.3940912	1.6068825	1.7447444	0.7992314	0.8595781	0.8156682	0.7842246	0.9103994	1.292442	1.2107765	1.0316017	1.1252222
Beta-actin, sequence 2	1.7039471	1.6030809	1.6907125	1.3246548	0.77629006	0.92639244	0.9754665	1.1575704	0.9068688	0.5332612	0.59130627	1.2835201	1.0428021
Interleukin-10	1.8509511	1.3351427	1.3174982	1.3448355	1.4071083	1.3141787	1.2765925	1.1747713	1.3248788	1.1924368	0.89421856	1.052281	1.074933
Phase-1 RCT-181	1.692654	1.288703	1.8168823	1.2683978	0.94188968	0.72313505	0.7398314	0.84228237	0.6224721	2.3776848	1.0801154	0.92923445	0.8220788
Phase-1 RCT-111	0.83757707	1.1372283	0.82023644	1.1431997	1.0372194	1.071294	0.9105033	1.0534148	0.7938695	0.7310391	1.1141933	0.8745084	
Apoptosis-regulating basic protein	0.631881	0.5894236	0.5673003	0.4648233	1.1319671	1.1931175	1.1241987	1.1240153	0.1734001	0.6625461	0.8301615	0.7873685	1.1340067
Glutathione peroxidase	0.3558181	0.42180836	0.71958536	0.76535418	1.2489941	1.0484444	0.7859858	0.5323434	0.51320326	0.5851469	0.9701291	0.6968814	0.67146355
Phase-1 RCT-239	0.60219836	0.7782507	0.6643653	0.6013878	1.3705828	1.5416204	1.2209153	1.0724903	1.3308428	1.8431084	1.0658231	0.9572584	0.77431405
Phase-1 RCT-87	1.0033432	0.8782018	0.83650186	0.89496154	0.8810115	0.9015412	0.88320484	0.89747304	0.7594115	1.305402	1.0209013	0.93133044	0.82587
Tyrosinophan hydroxylase	0.65135324	0.8522297	0.738817	0.48455912	1.2652156	1.2217458	1.2653935	1.1489803	0.85352194	0.73457974	0.9305915	0.9775388	0.99731255
Sulfotransferase K2	0.7165428	0.88565714	0.88568744	0.93944885	0.84638107	0.9586887	0.81068316	0.9267026	0.8445323	0.8984972	1.1610653	0.84358543	0.71989867
Calgranulin B9	0.734275	0.80500488	0.86380404	0.8871895	1.2070584	0.9417501	0.93822075	0.89381237	0.9157892	1.2348763	0.85223818	0.87346108	0.7869134
Phase-1 RCT-123	0.86481198	1.1506449	0.86380404	0.8871895	1.2070584	0.9417501	0.93822075	0.89381237	0.9157892	1.2348763	0.85223818	0.87346108	0.7869134
Phase-1 RCT-88	0.7602638	0.8368154	0.81298	0.79163545	0.843584	0.9836668	0.89615715	1.0355904	1.0879025	1.1678874	0.8922128	0.9803889	1.0121502
Aquaporin-3 (AQP3)	0.87884134	0.9238155	0.8479694	0.8899511	1.0581929	0.89615715	1.0355904	1.0879025	1.1678874	0.8922128	0.9803889	1.0121502	
Stearyl-CoA desaturase, liver	0.16599378	0.05001978	0.064122635	0.108351946	0.18433043	1.5286883	0.3369624	0.32818416	0.15513407	0.09878019	0.050004993	0.5475424	0.16062763
Phase-1 RCT-84	0.68657213	0.7948851	0.83768697	0.5070482	1.1261338	1.1688457	1.1408103	0.9702851	1.1728578	1.3008895	1.1831732	1.0196224	0.77084696
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-neo,													
neurosis observed; yes-both, necrosis with													
inflammation observed, no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 28)													

Table 29

Table 29. Expression Data for 24 Hour																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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CLO 76	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250	CLO 250																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

Table 29

Phase-1 RCT-49	1.06024	1.0177245	1.0266343	1.09848	0.8498006	0.874466	0.93301284	1.0009714	0.83301284	0.9872638	1.0511899	1.0978701	1.0818949
Calgranulin B3	0.98929485	1.0386674	0.9940351	1.0384609	0.9716977	0.91871125	0.9803035	0.91027829	0.9640693	0.9207829	1.0588464	1.1868939	1.0921537
NADP-dependent isocitrate dehydrogenase, cytosolic	0.9602389	0.95955455	1.0616525	0.85026914	1.153289	1.0779126	0.99670607	1.1288571	1.14246	1.0915675	0.8578707	1.074269	0.8950032
Oxyster binding protein 1	0.9781098	1.0186948	0.89702314	0.9211741	0.9520057	1.0349911	1.0507383	0.820471	1.0574642	0.9686282	0.85039204	1.0393502	0.76025486
Sodium/bile acid cotransporter	0.7377493	0.8389525	1.2769556	0.7423678	1.1480938	1.3909478	1.32358	1.105479	1.1634454	0.96777668	0.8794048	0.59944403	0.84898499
Phase-1 RCT-174	0.9039904	0.9016024	1.0512846	1.1379716	0.8837241	0.7945775	0.8807546	0.9802985	0.94294214	1.0231088	1.0502193	0.89916076	1.0560779
Phase-1 RCT-177	0.8985493	0.85862495	1.0649434	0.95455213	1.1284634	1.0130427	0.99026414	1.0791278	1.0965847	1.0118774	0.93563926	1.0472816	
Phase-1 RCT-177	0.856275	0.8535803	0.83887875	0.8123741	1.039398	1.1797496	0.9400405	0.983529	0.6579118	0.60657173	0.9438974	0.81278874	0.9456384
Inositol polyphosphate multikinase (ipmk1)	0.9054677	0.87178944	1.0330818	1.0087814	1.1925324	1.2427804	1.1180465	1.05008	0.80813416	0.7603708	0.78147574	0.8570978	0.7654978
Phase-1 RCT-256	0.8881882	1.0215355	0.9613369	0.9915086	1.0761766	1.0680946	0.8594897	0.81432885	1.0518668	1.034184	1.0643631	0.9689576	0.7901226
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	1.150708	1.1592822	1.2528844	1.1403394	1.0964824	1.0491545	1.007217	1.0215687	1.0050334	0.85917517	0.91100365	0.8657396	0.8630557
CDK102	0.72548838	0.87068385	0.89927	1.0196888	0.8275802	0.9807257	1.0437438	0.9122109	0.989552	0.8891386	0.93140598	0.80172	
Phase-1 RCT-209	0.7343456	0.8189498	0.7288842	0.969753	1.209514	1.051618	0.9671746	1.016905	1.1513075	1.3084172	0.8234901	0.9904128	0.711404
NADH-cytochrome b5 reductase	0.8908569	0.9902128	1.0824605	1.023684	0.93019846	0.93019846	0.9578129	0.9023999	0.8785165	0.7925124	1.0328974	1.1042862	1.0625716
Dynamin-1 (D100)	0.84804183	0.9684312	0.9954882	0.9643821	0.9815532	1.2791438	0.987388	1.120892	0.934336	0.884876	0.6514168	0.72133607	0.8255557
Sensenza marker protein-30	0.89617866	1.0506935	1.1200917	0.9598682	1.102487	1.0727208	0.987388	1.1413121	0.9235765	0.9075318	0.85074335	0.9709819	0.86742028
Phase-1 RCT-49	1.0388016	1.2547956	1.1058493	1.8397868	0.9635224	1.6530576	1.5233225	1.1800369	0.91358966	0.92516	1.1734023	0.84720986	1.4102762
Carnitine palmitoyl-CoA transferase	0.91948848	1.1845015	1.178908	1.2709482	1.2015884	1.0319034	1.0470655	0.8804853	0.68230778	0.7708933	0.8765931	0.9505628	0.8188172
Alpha-2-microglobulin	1.3068973	1.1845015	1.178908	1.2709482	1.2015884	1.0319034	1.0470655	0.8804853	0.68230778	0.7708933	0.8765931	0.9505628	0.8188172
Apolipoprotein CII	0.95653474	1.0829068	0.9754005	0.837841	1.239463	1.2705245	1.1858972	1.1103008	1.2032858	0.9103449	0.80069053	0.85914359	0.720271
Cathepsin L, sequence 2	2.1694722	1.244625	0.8384544	0.74990167	1.1542801	1.0301409	1.0540894	0.97838704	1.4024595	1.572601	1.1011258	2.2189558	0.81806004
Phase-1 RCT-141	0.82863764	0.9578206	0.9941006	0.97711927	1.0027802	0.8876828	0.91291506	0.8640359	0.90989894	0.8619611	0.8567279	0.9685943	0.7592353
Phase-1 RCT-289	1.0739333	1.1779376	0.92051035	1.1113776	0.8839419	0.8775165	1.2876743	0.92425535	1.06131	1.0273683	0.90161985	0.8613803	1.22084
Endothelin-1	1.1568412	0.82782048	0.85197004	1.621212	0.8880876	0.8720048	0.9696216	0.926171396	0.867013396	0.8762859	1.0260841	0.9688122	1.0532247
Phase-1 RCT-140	0.8442213	1.0328382	1.006603	1.032006	0.9544881	1.065874	1.1642538	1.7004826	0.85399157	0.9673972	1.0527328	1.1575968	1.9797957
Cyclin D1	0.64915913	0.8552159	1.0524073	1.278377	0.81636184	1.0584129	1.300108	1.040669	0.8175978	0.93862563	1.0109537	0.89346477	1.0803113
Phase-1 RCT-287	1.0180698	1.1077855	0.9333112	0.9327704	1.1284129	1.300108	1.040669	0.8175978	0.93862563	1.0109537	0.89346477	1.0803113	
Phase-1 RCT-281	0.7898638	1.1808523	1.0182704	0.8359506	1.0763597	0.9547073	0.81738698	1.0543511	0.7801876	0.7486816	0.85257816	0.78068805	0.84804814
Retinol-binding protein (RBP)	0.82728004	1.054555	1.11925055	0.84576108	1.3776917	1.178019	1.0078775	1.0332885	0.9804967	1.1733873	0.8719145	0.89804167	0.9145423
ATP-activated glucocorticoid receptor	0.98478323	1.2783332	1.0230447	1.0628188	1.0952966	1.2160704	1.1291646	1.0321511	0.9703386	0.68284177	1.0463225	1.1988751	0.8742063
translocation promoter (GyA)	1.054982	0.8886475	0.921171	0.98323084	0.841836	0.91334516	0.9499988	1.0887412	0.9898448	1.2284889	1.1282919	1.1524435	1.3169057
Phase-1 RCT-60	0.9138776	0.9254128	0.9065152	0.91559404	1.0343441	0.92815964	0.98966346	1.1143987	1.0948875	0.9207208	0.9015798	0.92706525	0.94461334
Pyruvate kinase, muscle	0.97927624	1.010814	0.95548275	1.086781	0.88530487	0.8689899	0.97205096	1.0335934	0.9388502	0.99069023	0.87753947	1.0541832	0.9488072
PAR interacting protein	1.0339017	0.8011803	0.94074965	0.77541095	1.007616	1.1206173	1.0439778	1.1101897	1.3020135	1.2315216	0.8088485	0.94858555	0.82161033
Nucleoside diphosphate kinase beta isoform	1.1097338	1.2237183	0.96087853	1.0080427	0.87781378	1.0059088	1.0837454	1.0934828	1.049213	1.096287	0.87374328	1.1187201	0.99660015
Gard153	1.504116	1.680814	1.5471333	1.1587747	1.0503203	1.0420596	0.8396124	1.4654088	1.2531165	1.5121571	1.2017453	1.1825272	1.3050629
Insulin-like growth factor binding protein 1	1.405547	1.0569907	0.87103254	0.80161268	0.96397504	0.89337504	0.9842775	1.0844952	1.1016494	1.1547298	0.96778376	0.95847857	
c-H-ras	0.8401808	1.0132732	1.009149	0.91208214	1.2311027	1.2570467	1.1288201	0.68666333	0.9697854	0.9228205	1.3558375	0.9544282	1.1400536
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1.1108056	0.5700699	1.002162	0.6370687	1.0487976	1.2357448	1.0091151	1.235016	1.2305869	1.3425889	1.1512262	1.037204	1.0413016
Phase-1 RCT-52	0.5719046	0.9078235	0.8683121	0.7781227	0.90537524	1.4505935	1.1119854	1.1113497	0.5575254	0.7400015	0.6682248	0.66146075	0.69521755
Alpha 1 - inhibitor III	0.83763304	0.7115717	0.8862056	0.69723976	1.2807417	1.3169249	1.1078243	1.2267154	1.1068736	1.2457397	0.833953	1.017921	0.8394833
Steroid carrier protein 2	0.89055804	1.0027584	1.0817981	1.2428385	1.28986	1.0508424	1.2768179	1.3698672	1.2174009	0.98710024	0.8742978	0.83323146	0.8260843
Organic anion transporter 3	1.0081619	0.59799756	0.820483	0.6527692	1.0036073	0.9534135	0.8544126	0.9200357	0.86504873	1.004252	0.8699653	0.9585503	0.85332423
Calgranulin B4	0.73747768	1.0332078	1.0706137	0.9593107	1.2236082	1.0118766	1.0263534	1.093088	1.0522426	1.3555948	0.9692158	0.9014889	0.8570439
Phase-1 RCT-182	0.7273083	0.9553136	1.0593894	0.853992	1.4531603	1.2831284	1.1658098	1.2638724	0.86603504	1.0662146	0.6174602	0.9036068	0.71726793
Calgranulin B8	1.0777656	1.0054383	0.876639	0.8521644	1.1041787	1.0348168	0.9241434	0.96045765	0.9102558	0.96617633	1.0421158	0.9389474	
Aldehyde dehydrogenase, microsomal	0.4046587	0.840525	1.2254317	1.042474	1.3032243	1.0724228	0.9832487	1.7485271	0.8372599	0.8832258	0.75105008	0.562187	0.6884067
Phase-1 RCT-128	0.4588193	0.3358186	0.520518	0.6876589	0.84731205	0.87732124	0.85324603	0.47093102	0.4268305	0.33595294	0.75105008	0.562187	0.6884067
Phase-1 RCT-102	0.7078458	0.6685897	0.9251844	0.7312499	1.3398787	1.2512723	0.9555507	1.0876636	0.6744202	0.8299048	0.8857598	0.859682	0.9068815
Preproalbumin, sequence 2	1.5344003	0.9594896	0.9472874	0.910528	1.422689	1.422689	1.7463613	0.7547723	1.2831333	1.1480535	0.7712514	0.8386874	0.8080715
Apolipoprotein AII	0.7942239	0.9190809	0.7869724	1.2047232	1.055468	0.833729	0.8715988	1.422689	0.8254183	0.890034	0.8201005	0.8948941	1.0105708
Phase-1 RCT-40	0.9937492	0.7691087	1.045112035	0.80702764	1.0534043	0.95551	0.94352438	0.8655873	0.72537	0.811059	0.8201005	0.8948941	1.0105708
Phase-1 RCT-10	0.7523313	0.7220283	1.0325383	0.8085986	1.3848809	1.243958	0.9728906	1.1281309	0.8799699	0.6386255	0.9389899	0.8446962	0.9954418

Table 29

Phase-1 RCT-168	1.1161588	1.024108	1.0241808	0.937628	0.98822915	0.96853183	1.1388818	1.0466332	1.0800414	0.955419	1.1754576	0.89058873
Phase-1 RCT-169	0.8947768	0.82675743	0.90162705	1.2358864	0.9076201	0.937628	0.98822915	0.96853183	1.1388818	1.0466332	1.0800414	0.89058873
Beta-alanine synthase	1.4620898	1.0478215	1.2265762	0.9974059	1.3621802	1.2760171	1.2968379	0.74774545	0.73762815	0.8026111	0.53174627	1.2141054
Phase-1 RCT-206	0.50568113	0.5518755	0.7134052	0.73619983	1.4932228	0.8378002	1.2012984	1.8005932	1.0124761	1.0056144	0.51653355	0.6874827
Carbonic anhydrase III	0.683671	1.3674699	1.0927979	1.32104	1.8393228	0.8378002	1.2012984	1.8005932	1.0124761	1.0056144	0.51653355	0.6874827
Phase-1 RCT-201	0.81785154	0.8285808	0.843803	0.77359783	1.3218302	1.2123888	1.0946348	1.0536492	1.0663463	0.9659509	0.720362	0.7327814
Carbonic anhydrase III, sequence 2	0.80932	0.7613602	0.7647238	1.147145	1.2083049	1.2085953	1.1719223	1.681762	1.2164011	1.033719	0.7032643	0.96671807
Phase-1 RCT-21	0.6716755	0.7088648	0.8274185	0.9471153	1.2284541	1.0611837	0.9930724	0.99285736	1.0380732	0.90088624	0.9587255	0.94966844
Phase-1 RCT-21	0.6716755	0.7088648	0.8274185	0.9471153	1.2284541	1.0611837	0.9930724	0.99285736	1.0380732	0.90088624	0.9587255	0.94966844
HMG-CoA synthase, mitochondrial	0.82719177	1.2701389	0.9876761	0.6399477	0.84793713	1.0468481	1.0744107	1.0410855	0.73510045	0.7310088	1.2282188	1.4455162
Phase-1 RCT-189	0.92750496	1.03048	1.1528984	0.8036765	1.2841735	1.839428	1.0744107	1.0410855	0.73510045	0.7310088	1.2282188	1.4455162
Phase-1 RCT-40	0.8633591	0.7665788	0.96591363	0.9587952	1.2148898	1.1878781	1.0744107	1.0410855	0.73510045	0.7310088	1.2282188	1.4455162
Urinary protein 2 precursor	0.8707199	0.81820303	0.7944683	0.58877893	1.0725007	1.0740273	1.0408008	0.7631108	0.84010035	0.85560817	1.1606925	1.264848
Paraoxonase 1	0.6301686	0.80039081	0.83943975	0.7384444	1.124285	1.3161633	1.0408008	0.7631108	0.84010035	0.85560817	1.1606925	1.264848
Phase-1 RCT-176	1.6821066	0.7404288	0.91567796	0.54986814	1.9274943	1.0121646	0.8671658	0.8088677	0.79885765	0.754487	0.9798485	0.70145905
Phase-1 RCT-176	1.6821066	0.7404288	0.91567796	0.54986814	1.9274943	1.0121646	0.8671658	0.8088677	0.79885765	0.754487	0.9798485	0.70145905
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
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Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
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Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
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Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.59055724	0.8132516	0.781501	0.8914421
Phase-1 RCT-152	0.53610164	0.85178816	0.8471035	0.7444822	1.0251546	1.4451759	1.1168102	1.0631302	0.			

Phase-1 RCT-155	0.8490045	0.95355016	0.994759	1.3745525	0.77082735	0.7768280	0.9710129	0.832117	0.98970657	1.0227301	0.921607	1.0847225	1.0951895
Phase-1 RCT-113	1.1253973	1.1701739	1.0590038	1.0688119	1.1018058	0.96802376	0.9564536	1.048788	0.9243725	1.0975763	0.9308428	0.9819788	0.95461298
Endogenous retroviral sequence, 5' and 3'	1.1309875	1.309439	1.3024776	1.181104	1.4116328	0.9164059	1.5041084	0.95104325	0.72858158	0.70105016	1.1356703	0.87063457	0.04882076
UTR	1.0789885	0.9731921	0.9482086	0.6332676	1.2093507	0.8166328	0.84038425	0.77047724	0.67273894	0.42612498	1.100483	1.1301011	0.84379873
Beta-actin	0.9144948	1.0865247	0.9290835	1.0594393	1.0842584	1.2085605	1.0688321	1.1224254	0.9148987	0.935248	1.157088	0.8537874	1.134871
Phase-1 RCT-65	1.3085401	1.1024977	1.0032218	1.1433822	1.2491324	1.3168808	1.062873	1.48013	1.0068011	1.0495045	1.0112402	0.69423174	1.1079848
MHC class I antigen RT1.A1(0 alpha-chain	1.1929992	1.220737	1.005925	1.037324	0.84256697	0.97182783	1.0921773	0.9640634	1.0125102	1.0888308	1.2805521	0.9723598	1.2563033
Bax (alpha)	1.0664368	1.2229317	0.97824705	1.0018888	0.82499256	0.81777806	0.83327385	0.88369715	1.1428894	1.283531	1.0589657	1.0395573	1.1370678
Carbonic dehydratase	1.1785138	1.1351978	1.2204858	0.8663081	1.1442285	0.8165179	0.8095892	0.8431527	0.8064164	0.7467704	1.2808683	1.3861787	0.997809
Beta-actin, sequence 2	1.1785138	1.1351978	1.2204858	0.8663081	1.1442285	0.8165179	0.8095892	0.8431527	0.8064164	0.7467704	1.2808683	1.3861787	0.997809
Interleukin-10	1.1463419	1.2580728	1.0109065	0.92383546	0.7913813	0.95239955	0.9857216	0.9138888	0.8131008	0.618838	1.4318409	0.98071444	1.4285841
Phase-1 RCT-191	0.957703	1.0112606	0.93005776	1.0522851	1.0814689	1.059488	1.0778302	1.1851378	0.8140837	0.83586527	0.8765754	0.74138955	0.8345218
Phase-1 RCT-111	0.8587403	1.2222898	0.91879716	0.77887057	1.1037633	1.1146505	1.0392216	0.9620979	0.8000054	0.8301878	1.0234784	1.0509181	1.159574
Apoptosis-regulating basic protein	0.8035941	0.9554493	1.0684318	0.83884854	1.1007688	1.1403348	0.9177121	1.3704787	0.78462245	0.74487	0.8081348	0.64847344	0.7816571
Glutathione peroxidase	0.60359037	0.849045	0.950889	0.708751	1.007688	1.1403348	0.9177121	1.3704787	0.78462245	0.74487	0.8081348	0.64847344	0.7816571
Phase-1 RCT-239	0.9774028	1.0883745	1.0288054	1.3403283	0.7752877	0.8423	0.90802317	0.9022248	0.82508725	0.72853547	1.0628181	0.82980075	1.1390542
Phase-1 RCT-67	0.9490309	0.8768637	1.0147259	0.7537832	1.0889566	1.1368284	1.0285687	1.1382904	0.8769235	0.9700253	0.8965692	0.9343398	1.0288473
Sulfolipase K2	1.055638	0.8768637	1.0147259	0.7537832	1.0889566	1.1368284	1.0285687	1.1382904	0.8769235	0.9700253	0.8965692	0.9343398	1.0288473
Calgranulin B9	0.91309947	2.0845335	1.6701734	1.1802834	2.0158272	1.4298481	0.98104244	1.1372457	0.89780895	0.98885717	0.73206335	0.93844184	0.7740833
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669	0.8489358	0.97644335	0.93666305	1.0087385	1.0162578	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-48	1.0392454	0.94757116	0.8621439	0.96522635	0.8931241	0.796243	0.833426	1.0623356	0.8710671	0.9553766	0.8878808	1.005818	1.005818
Phase-1 RCT-123	0.9519456	0.88811475	1.008855	1.00669									

Table 20. Expression Data for 24 Hour

Phase-1 RCT-49	0.97586066	1.0243063	1.0191988	1.2770728	2.2781833	1.1162382	0.93492883	0.9999538	1.2135141	0.94283373	0.8715359	0.94605273	0.8171284
Calgranulin B3	1.0683078	1.0274974	1.6072657	1.2571162	2.2978952	1.5577714	0.91940165	0.93186397	1.1387705	1.3266456	1.0443389	1.2841286	0.93587145
NADP-dependent isocitrate dehydrogenase, cytosolic	0.9044795	1.0228876	0.6405032	0.883624	0.42253835	0.6028707	1.0382553	0.9616564	0.7067854	0.7843551	1.3450128	0.98148254	1.1572465
Oxysterol binding protein 1	0.99749726	1.1031793	1.2301778	0.7014423	0.7317208	0.8727345	1.0080123	1.0837522	0.812148	1.083249	1.2762716	1.1428399	1.1643881
Sodium/bile acid cotransporter	1.0990115	1.0278434	0.87733318	0.6159592	0.26031644	0.3732801	1.0587011	1.0116428	0.7821948	0.4844858	0.9028805	0.8068859	1.1025871
Phase-1 RCT-174	1.0254452	1.0180146	0.9001345	0.9128838	0.9004898	0.7821274	0.87520685	0.93005638	1.2941722	1.0046908	0.9868697	0.9715863	0.81430197
Phase-1 RCT-77	1.0992223	1.214521	0.8815238	0.9612866	0.77061266	0.80463378	0.85433378	0.9015191	0.482327	1.0138954	1.036739	1.036739	1.3881203
Inositol polyphosphate multikinase (ipmk4)	0.77289893	0.5210473	0.51900695	0.4800848	0.328804	0.28786616	1.0200475	1.0137259	0.8744889	1.7474297	1.3132327	0.7446848	1.0383893
Phase-1 RCT-256	1.0104756	1.057425	0.77223843	1.3992337	0.474829	1.31074	1.0140744	1.0556498	0.69727373	0.9440784	1.1170562	0.7831778	1.0291848
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	2.2489514	0.8645093	1.0091189	0.7823181	0.43400705	0.49743629	0.83808904	0.81683035	0.7429929	0.45221612	0.8570891	0.6998117	0.8180151
CDK102	0.8942373	1.0401324	0.9597939	1.3695815	0.8611594	0.94086634	1.0599042	1.0802824	0.7065499	0.9487424	1.0846802	0.8721783	1.0786888
Phase-1 RCT-209	1.1644664	0.9332382	0.8170768	1.0140768	0.891228	0.9450487	1.0163497	1.2827431	0.9471392	1.0071105	0.8384218	0.815534	1.0252872
NADH-cytochrome b5 reductase	1.0483775	0.6310298	0.5016894	0.6175164	0.3911482	0.5018323	1.1217375	0.8484194	0.7508338	0.7804775	1.108455	0.7304134	1.01252872
Dynamin-1 (D100)	0.8478524	0.9891286	0.804886	0.95323443	0.7864142	0.8688291	0.9778185	1.1684139	1.0533482	0.88763475	0.998888	0.9408897	0.86522245
Senescence marker protein-30	0.88813155	0.69001544	0.74246347	0.60150184	0.065319005	0.454831	1.1123818	1.0450069	0.6272075	0.27853038	1.4121476	0.7754318	1.5519705
Phase-1 RCT-49	1.0565972	0.9712536	0.84216344	0.7941308	0.39712462	0.688012	0.9264467	1.0080161	0.8210636	0.832618	1.0771154	0.8911229	1.1618327
Carbonyl malic-CoA transferase	0.9217089	0.82044613	1.0448833	0.8339909	1.0114609	0.14880124	0.8810724	0.9310256	0.85292568	0.94912108	0.7148143	0.8206434	1.1484397
Alpha-2-macroglobulin	0.5336348	0.5010401	0.25856206	0.4307238	0.13223965	0.14880124	0.8810724	0.9310256	0.85292568	0.94912108	0.7148143	0.8206434	1.1484397
Apolipoprotein CII	0.82957804	0.68925846	0.5808861	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198	0.5461198
Calreticulin 1, sequence 2	1.0308439	1.2453106	1.0158839	2.0617847	3.2933927	1.7515035	0.9887323	0.9448594	1.0965822	3.0554178	1.4004468	2.215348	1.5886518
Phase-1 RCT-141	1.9195072	2.6088638	5.1658418	6.648088	19.10274	7.48428	0.9887323	0.9448594	1.0965822	3.0554178	1.4004468	2.215348	1.5886518
Phase-1 RCT-289	0.7700189	0.8460522	0.6847272	0.8323056	0.5931372	0.6765383	0.9055611	0.8955242	0.8034694	1.2127024	0.916215	0.916215	0.916215
Endothelin-1	1.661923	1.0423925	1.1720282	1.450301	1.3525282	1.3599084	0.9507428	0.9007873	1.2104523	0.8206460	0.94847864	0.9246289	0.78813003
Phase-1 RCT-140	0.8703084	1.0303349	1.2897898	2.4033994	1.4830773	2.0574925	1.612985	1.0538121	1.6117715	1.2906079	0.5919781	1.0215455	0.89330137
Cyclin D1	0.868487	1.0149541	1.2897898	2.4033994	1.4830773	2.0574925	1.612985	1.0538121	1.6117715	1.2906079	0.5919781	1.0215455	0.89330137
Phase-1 RCT-287	1.024266	0.9823822	1.0240931	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953
Phase-1 RCT-281	0.94382507	0.7626531	0.8049811	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953	0.7362953
Retinol-binding protein (RBP)	0.9559298	0.6905546	0.82125635	0.5002953	0.7681225	0.3878988	0.9861871	0.9111436	0.7591311	1.2203445	1.1047841	1.4685866	1.1701286
ATP-activated glucocorticoid-receptor	1.0852485	1.2106671	1.0320622	1.8969401	1.2287866	1.4115916	1.0526855	0.96181375	1.2454462	1.0093244	1.0301731	1.2411356	1.2411356
translocation promoter (Gyk)	1.0358446	0.9387335	0.97395414	1.1307015	1.4303195	1.0101089	0.9484746	1.388208	1.1431404	0.8926184	0.9120257	1.080338	0.822063
Phase-1 RCT-50	1.2178328	1.2472234	1.2232014	1.8738325	2.1357522	1.8510845	0.9404741	1.0512956	1.0550194	0.9875792	0.69043714	0.93208844	0.7197864
Pyruvate kinase, muscle	0.9880509	1.2141242	1.386238	1.910846	2.4942105	1.7751994	0.9853478	0.8816899	1.0005305	0.90743476	0.8500803	0.9499066	0.90624765
PAR interacting protein	1.0880276	1.4795583	1.2451006	2.1025286	1.8030911	1.7552234	1.1120044	1.0174289	0.9342405	1.8182374	1.2571884	1.2793146	1.6095233
Nucleoside diphosphate kinase beta isoform	1.0203187	0.6867953	0.92502755	0.37815678	0.106923786	0.23977186	0.7895198	0.77607895	0.59701803	0.2302537	0.8187832	0.5332613	0.8321487
N-hydroxy-2-acetylaminofluorene sulfoxyltransferase (S11C1)	1.0698527	1.2218478	1.2547028	1.7184129	2.3482122	2.1793523	1.107138	1.0884286	1.2105945	1.2304084	1.0477052	1.0613161	0.8984648
Phase-1 RCT-52	1.2817193	0.4892697	0.3433435	0.27558807	0.19518289	0.5122007	0.87169784	0.8611194	0.7505206	0.7601414	1.1040483	0.9998412	1.2700888
Alpha 1 - inhibitor III	0.67880186	0.8037288	0.4356084	0.4977355	0.19848953	0.30333257	0.8217645	1.0460413	0.8627238	0.48618534	0.7626263	0.58501047	1.1188627
Stand carrier protein 2	0.9134018	0.92259127	0.89382758	0.7736666	0.7353627	0.7400719	1.0889094	1.0803741	0.8001915	1.2668116	1.499086	1.1911296	1.261307
Organic anion transporter 3	1.0516382	0.99284893	1.1492584	0.777347	0.61863844	0.8225944	1.1989406	1.2403215	0.843389	1.1526127	0.9666416	0.9397171	1.0870864
Calgranulin B4	0.9597128	0.6708476	0.82784003	0.7056428	0.2815282	0.49236035	1.1938097	1.0558029	0.7478404	0.79647505	1.4353431	0.98823535	1.1746662
Phase-1 RCT-182	1.0740895	0.27392205	0.77760404	0.9362862	0.64795566	0.47385693	0.6137107	0.7288113	0.6249178	0.74871534	1.1040483	0.9998412	1.2700888
Calgranulin B8	1.1637708	0.1767813	0.1619808	0.3048842	0.5650912	0.5122007	0.87169784	0.8611194	0.7505206	0.7601414	1.1040483	0.9998412	1.2700888
Aldehyde dehydrogenase, microsomal	1.0096554	1.2703005	1.0433328	1.2191534	0.96588654	0.8884684	1.0687747	1.1320454	0.8742379	0.84739935	0.9386844	0.91283184	1.1803493
Phase-1 RCT-128	0.8860524	1.9040848	0.72572637	0.9307375	0.7357783	0.56007814	0.9586838	1.2518427	0.7232108	1.1631421	1.0494541	0.8783303	1.3884152
Phase-1 RCT-102	0.92638856	0.5081898	0.46258114	0.5405593	0.16284688	0.32188815	0.858752	0.8378034	0.16284688	0.9361544	0.6372141	0.4843338	0.7204864
Preprolactin, sequence 2	0.74709076	0.68460494	0.41534498	0.3577593	0.28516087	0.35007575	0.859227	0.88590314	0.6194203	0.80403775	1.2462364	0.8078017	1.2103612
Preprolactin, sequence 1	0.4452884	0.3815846	0.2667238	0.21188591	0.17475581	0.18008524	0.959767	1.8102893	0.9688778	0.84112389	0.6552296	0.7204038	1.4488447
Phase-1 RCT-102	0.9470495	0.93098608	0.9580804	1.0287387	0.78706843	0.7475581	0.93907675	1.0398864	0.8494211	1.0935953	1.0866701	1.1086894	1.4242887
Phase-1 RCT-48	1.1675109	1.0938517	1.0088118	1.3505863	0.8259085	0.9012404	0.9687007	1.1085708	0.82320255	0.7872354	1.011728	0.90227885	0.9836959
Phase-1 RCT-8	0.7659848	0.7265608	0.4381422	0.6447457	0.29880142	0.34950103	0.85616795	0.84953463	0.6228061	0.7817489	1.2292513	0.7770482	1.124942

Table 28

Phase-1 RCT-168	0.77003664	0.8781263	0.75136954	0.5750061	0.2586505	0.40039304	1.0856777	0.92717205	0.8776507	0.8369003	1.1428528	1.048772	1.0541917
Phase-1 RCT-88	1.1821217	1.0050626	0.954527	0.956224936	0.8902988	0.9502988	0.92717205	0.8776507	0.8369003	1.1428528	1.048772	1.0541917	
Phase-1 RCT-241	1.495187	1.394049	0.9007695	0.97084894	0.4602472	0.7641623	1.0804405	0.92717205	0.8776507	0.8369003	1.1428528	1.048772	
Phase-1 RCT-248	0.80776596	0.31703943	0.15768606	0.102809266	0.1348167	0.102809266	0.101345	0.92717205	0.8776507	0.8369003	1.1428528	1.048772	
Phase-1 RCT-281	0.5802854	0.6980801	0.13151392	0.1070069	0.9008965	0.9008965	0.9008965	0.9008965	0.9008965	0.9008965	0.9008965	0.9008965	
Phase-1 RCT-281	1.0394343	0.97221164	0.8234063	0.85658014	0.91174126	0.8234063	0.85658014	0.91174126	0.8234063	0.85658014	0.91174126	0.8234063	
Phase-1 RCT-281	1.145804	1.116673	0.8347482	0.8943658	0.93510948	0.8347482	0.8943658	0.93510948	0.8347482	0.8943658	0.93510948	0.8347482	
Phase-1 RCT-271	0.9250991	0.9352302	0.5926202	0.9161555	0.9662688	0.73050035	0.85121107	0.9533563	0.7467103	0.6410573	0.7471783	0.6934962	
Phase-1 RCT-271	1.0749481	0.9827918	1.1609857	1.1644414	0.74158714	0.91152335	1.0974708	0.707485	0.9764778	0.8925745	0.9970384	1.2756165	
Phase-1 RCT-189	1.0133795	0.8016584	0.8419186	0.7556223	0.7556223	0.93697884	0.947800734	0.8234063	0.8234063	0.8234063	0.8234063	0.8234063	
Phase-1 RCT-40	1.0286253	1.0142977	0.9058137	0.9151533	0.58677783	0.6525233	0.93697884	0.947800734	0.8234063	0.8234063	0.8234063	0.8234063	
Phase-1 RCT-40	0.7636657	1.1252172	0.7389764	1.5151533	1.1272708	1.035347	0.75092985	0.92337485	0.8846574	0.99611406	0.9376832	1.1071242	
Phase-1 RCT-40	0.84782964	0.731044	0.6883907	0.6636967	0.42068768	0.3424132	0.90001106	1.0304777	0.73201863	0.74202147	1.3107543	0.8712938	
Phase-1 RCT-40	0.39632148	0.60765834	0.6394367	0.12195558	0.6583544	0.48324705	0.4778444	0.7003464	0.7647774	0.73201863	0.74202147	1.3107543	
Phase-1 RCT-38	0.7023558	0.78924726	0.4349051	0.48446507	0.19402899	0.3014074	0.8248035	1.076931	0.8634227	0.8551182	1.038981	0.79837687	
Phase-1 RCT-38	1.0750768	1.1277264	0.8476908	1.4826338	0.38242704	1.4364172	1.0348035	1.076931	0.8634227	0.8551182	1.038981	0.79837687	
Phase-1 RCT-270	0.8635978	0.8142408	0.84630214	0.465452104	0.38242704	0.3776858	0.96638733	0.8160949	0.8631677	0.72376826	1.2349594	0.89316339	
Phase-1 RCT-270	0.7152317	0.5126207	0.41119926	0.3340674	0.3340674	0.7676558	0.81730535	0.83841434	0.83850638	0.66669894	0.750318	0.6595398	
Phase-1 RCT-152	0.9293912	0.8947956	0.9045257	0.86317597	0.4742653	0.7860527	1.1598688	1.0943879	0.9641975	1.1685371	0.9177658	1.0604742	
Phase-1 RCT-152	1.0160201	1.3961824	1.4618459	2.4885514	3.0684192	2.1480424	0.4669169	0.4669169	0.4669169	0.4669169	0.4669169	0.4669169	
Phase-1 RCT-152	0.9308474	1.0259718	0.7517298	1.1433519	0.317878	1.21656	1.1839417	1.1401983	0.9397172	1.3926054	1.0973476	1.2532323	
Phase-1 RCT-152	0.87745	0.31689378	0.40101736	0.2227116	1.4021212	0.69470666	0.76110315	0.4772029	0.63413879	0.9530595	0.6938452	1.4524951	
Phase-1 RCT-152	1.0682712	1.2622952	1.2053946	1.8094178	1.772306	1.1680981	1.2003773	0.72649056	1.4765181	1.0772981	1.0489185	1.077714	
Phase-1 RCT-154	1.0083412	2.288147	2.383056	4.6043005	4.404344	4.1387987	0.9705328	0.8576501	1.115014	1.1224256	1.0526112	1.0315523	
Phase-1 RCT-154	1.2421241	1.281933	1.1789733	2.8132963	3.6311148	2.335852	1.1644005	1.1520502	0.9381786	1.1752942	0.9713565	1.0793111	
Phase-1 RCT-154	0.58013578	0.4801837	0.6083662	1.6828226	1.1435351	0.95330536	0.9116935	1.1637614	0.86512	0.9532587	1.0044976	1.0411184	
Phase-1 RCT-154	0.68631768	0.8905955	0.84055257	1.1806669	1.9509955	1.212212	0.4920728	0.100253	0.9883067	0.8021496	0.9433623	1.063254	
Phase-1 RCT-154	0.98754135	1.5124706	1.2768419	8.7289878	4.7708188	1.2895989	1.2254753	0.9515552	1.2039192	1.188435	1.1426753	0.9277888	
Phase-1 RCT-154	0.90326981	1.0504888	1.0634937	1.2860784	1.2386617	1.2092708	0.9119597	1.0559097	1.3377788	0.8550174	1.0168459	1.1250457	
Phase-1 RCT-154	0.98022054	1.889922	1.0943436	1.704671	1.6200306	1.0116329	0.90687495	0.96416485	0.9553343	0.8967571	0.9518125	1.0545459	
Phase-1 RCT-205	0.9056656	0.8762444	0.86843408	0.93560054	1.416328	0.8011008	0.93763334	0.9175007	1.1424887	0.8325528	0.92307667	0.9371059	
Phase-1 RCT-48	1.97528468	1.0371582	1.1048107	1.2010847	1.3039582	1.1215438	1.002022	1.062245	1.2458918	0.7016113	1.0606142	0.88695583	
Phase-1 RCT-48	0.17752948	0.097382	0.1001337	1.0810847	1.07762	1.0425697	1.292447	1.1203736	1.1332345	1.006564	0.765318	0.90586045	
Phase-1 RCT-48	0.98877465	1.240376	1.1698172	1.3098485	1.2064003	1.2001175	1.1372107	0.9147469	0.8699389	1.0894051	1.1553308	1.0977932	
Phase-1 RCT-48	1.2428577	2.2039905	3.2629893	3.2224083	3.2224083	2.5970766	1.4579102	1.6439315	0.8601038	1.6183573	0.8677086	0.90378684	
Phase-1 RCT-48	0.98977465	1.240376	1.1698172	1.3098485	1.2064003	1.2001175	1.1372107	0.9147469	0.8699389	1.0894051	1.1553308	1.0977932	
Phase-1 RCT-48	1.0970896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	
Phase-1 RCT-48	0.9870896	1.2579374	0.9718072	1.781124	2.396364	1.5511414	1.0512484	0.9204565	1.3695757	0.968367	0.99165457	0.9255562	

Table 29

Phase-1 RCT-158	0.7959672	0.9476078	1.0036565	0.7720175	0.9071053	0.8779145	0.9775889	0.9634755	1.4350228	0.8119408	1.0584984	0.9881818	0.788354
Phase-1 RCT-113	0.97354954	1.1812654	1.2387434	1.2205224	1.8176333	1.1928838	1.223845	1.1410019	1.2881078	1.4877118	0.8788527	1.1394359	0.95120066
Endogenous retroviral sequence, 5' and 3'	0.8007519	0.87735987	0.99969894	1.0143306	0.90660965	0.7128742	1.213356	1.2235526	0.8279691	2.3012395	0.8011342	0.7676363	0.94191647
LTR													
Beta-actin	0.8697028	1.425739	0.94162154	1.750575	1.265545	1.5824912	2.3040056	2.0273225	1.07393	2.7878108	1.2672379	1.4041195	1.2431613
Phase-1 RCT-65	1.043522	1.0660897	1.1386333	1.3903891	1.0703056	1.2085007	1.1739428	1.180283	1.3234937	1.6824588	1.1397786	1.0949265	0.72533023
MHC class I antigen RT1A.10) alpha-chain	0.85849854	1.5004892	1.8087521	1.6289176	1.8789735	1.5991728	1.2818154	1.4500878	1.1003578	1.3148192	1.0803581	1.0827859	0.7898967
Box (alpha)	1.0879818	1.332116	1.4372963	2.6248136	3.9086614	3.0786192	1.2385264	1.2389986	1.3589362	1.2693458	0.9338478	1.0653334	1.1471728
Carbonic dehydratase	1.032963	0.844806	2.4785566	0.5190734	1.1011152	1.1157993	0.94776664	0.88365693	1.4686044	0.99331305	0.946886	1.002473	0.9055115
Beta-actin, sequence 2	1.0388975	1.516129	1.1618828	2.5218012	1.478557	1.7948809	1.2532537	1.0877943	0.97028008	0.92983783	0.9517849	1.1341707	1.1687894
Interleukin-10	0.8796477	0.8964011	1.1390786	0.84450516	0.9687894	1.2258692	1.0643572	0.99781665	1.2398129	1.0598876	0.9074315	1.0555445	1.3393159
Phase-1 RCT-191	0.8128049	0.9922228	0.9284482	1.336852	1.4846584	1.3258895	0.87059685	1.0260553	1.3154	1.0503707	1.0233644	1.0512861	0.8547018
Phase-1 RCT-111	0.84275985	0.97371393	0.78760904	1.1292341	1.0821108	1.0186894	1.3445319	1.343094	1.2443621	1.4280519	0.9476597	1.1287097	1.2983321
Apoptosis-regulating basic protein	0.85304534	1.2013282	0.76688313	1.2381985	0.9529141	0.78365337	0.92534095	1.0048518	0.8887545	0.98230884	0.9718216	0.9703873	0.9615388
Guthathione peroxidase	1.0181545	0.82791847	0.7704902	1.0172722	0.4850058	0.5103364	1.0482865	0.88858995	0.65826696	0.42864376	1.2343097	0.54806533	1.1009835
Phase-1 RCT-239	0.8708341	0.9535451	1.0813596	1.259876	1.1736157	1.8084131	1.1190128	1.1102828	1.3790381	0.8380306	0.87685313	0.9240445	0.71839546
Phase-1 RCT-67	0.94170463	0.8185927	0.87862584	0.8473813	0.7991968	0.776532	0.8144961	0.9762032	1.3879861	0.75212514	0.8959288	0.8999407	0.7825044
Tryptophan hydroxylase	0.9486884	0.94634285	1.027837	0.9484835	0.9156227	0.8265416	1.1088933	1.1084284	0.8539988	1.1643839	1.3318605	1.1031317	1.1438615
Sulfotransferase K2	0.77890056	0.67853083	0.54878366	0.51689126	0.6135232	0.8189603	1.0654056	1.1530807	0.7861573	1.1639488	1.1086125	0.93820765	1.0137866
Calgranulin B9	1.1328754	1.1255927	0.67797755	0.8397562	0.75175835	0.6307621	0.8701226	0.84653497	0.80812653	0.73103	1.0783505	0.88315787	0.74987143
Phase-1 RCT-123	0.8500373	0.9453556	0.8279407	1.0456805	0.87194	0.9461917	0.89357257	0.8468516	1.4828521	0.92441034	0.95812714	0.9684868	0.84821455
Phase-1 RCT-98	0.845746	0.9847755	0.8968084	0.9381064	0.8153956	0.8441597	0.9837325	0.924431	1.1789325	0.9530789	1.0046631	0.9403586	0.8584565
Aquaporin-3 (AQP3)	0.88066345	0.8960177	0.89331007	0.8123487	0.747896	0.8408249	0.8468608	0.8882802	1.149028	0.91994818	0.88127615	0.960515	0.7857755
Stearyl-CoA desaturase, liver	0.7770879	0.12003585	0.16834863	0.06016436	0.09470315	0.04473025	0.4584087	1.4982861	0.34655786	0.05559252	0.08423947	0.2571235	0.18653493
Phase-1 RCT-64	0.9198175	0.6501602	0.4911111	0.4075763	0.3080581	0.37198994	1.1396965	1.018815	1.0039473	0.86218376	0.8711778	0.8898717	0.85274728
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes=recr,													
necrosis observed; yes=both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 28)													

Table 28

Table 29. Expression Data for 24 Hour															
Compound-Dose (2)	Timepoint (1)														
Animal Number (3)	Liver Toxicity Inflammation Classification (4)														
Gene Name (5)															
	CYCA 20	CYCA 20	CYCA 20	CYCA 20	CYCA 80	DEX 8	DEX 8	DEX 8	DEX 8	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30	DEX 30
	no	426	434	436	no	436	436	436	436	no	1354	1354	1354	no	245
Gamma-actin, cytoplasmic	1.0745239	1.0903760	0.8812416	0.8044261	1.0504767	0.9935521	1.3776216	1.2107049	1.0015125	1.1047716	0.9755414	1.1522331			
Phase-1 RCT-145	0.6580293	0.8403946	0.9526797	0.9157196	1.0950401	1.128432	0.872258	1.0149844	1.0494687	1.035229	1.022923	1.1503925			
Gadd45	0.898972	0.970908	1.130373	1.0658662	1.1475778	0.8989855	1.1271727	0.8143447	0.8359553	0.78609977	0.8807292	1.0341949			
Phase-1 RCT-78	1.3069156	1.167088	0.9781825	1.2565862	1.0271409	0.9016074	1.0477102	0.95241866	1.0459738	0.8143447	0.8359553	1.2881368	1.0054785		
Fas antigen	1.3954238	1.6514571	1.2802508	1.5930828	1.3967148	1.1093762	1.0450878	1.2090605	1.0450878	1.2463726	0.8307147	0.9383163			
Macrophage inflammatory protein-2 alpha	0.87978137	0.98359364	1.2305254	1.006483	0.80393485	0.9056923	0.8391192	0.9527214	0.9843064	0.7477584	0.9088435	0.852841			
Interleukin beta1	1.0899867	1.1697568	1.207472	1.111719	1.0817413	1.3321288	1.1183366	1.1376161	1.4544263	1.1473787	0.9149853	0.8543854			
Phase-1 RCT-207	1.0595306	0.8409313	1.1121846	0.9441503	0.8334025	1.493406	1.1954847	1.4177564	1.0698334	1.4322338	1.6315132	0.898502	0.831024		
Aspartate aminotransferase, mitochondrial	1.1472163	1.157053	1.2219599	1.116712	1.1910645	1.0848434	0.8316338	1.1122069	1.0257474	1.0047083	0.9708746	0.9231978			
Casimir-alpha	0.78269327	0.7482339	1.108623	0.85248625	0.8525127	1.2160432	1.297072	1.1587578	1.2978811	1.1922562	1.1291968	1.1380421	1.0886225		
Malic enzyme	0.6879539	0.6937668	0.7578325	0.44925976	0.5188262	0.6529787	0.9793479	1.0296935	0.9738704	0.8572274	0.8439349	0.90288356	1.5397187		
Phase-1 RCT-50	0.9605634	0.8938182	1.0844314	0.9487388	0.9041121	1.1780765	1.0487024	1.0769858	1.1814307	1.1187033	1.0143969	1.1409343	1.0933458		
Phase-1 RCT-192	1.1163945	1.1802254	1.0971187	1.1932416	1.3580617	0.9339889	0.8207323	0.8912238	0.8132519	0.91144097	0.8665707	0.8459345	0.9036466		
Phase-1 RCT-288	1.3390166	1.198772	0.7762065	0.9069493	1.0402434	0.9436784	0.88052344	0.75769336	0.8613958	1.0503352	0.9401083	0.7493552	0.74631274		
Phase-1 RCT-37	0.9593903	1.073692	0.8927616	1.241572	1.0828205	1.4140047	0.9860507	1.2021775	1.6177237	1.8932828	1.3942528	0.8242801	0.9426175		
Organic cation transporter 3	1.1485768	1.2880225	1.1503327	1.4407344	1.186245	1.1565741	0.8640005	1.001734	1.2119286	1.1031155	0.9716688	0.7685745	0.8287854		
60S ribosomal protein L6	1.1172074	1.246229	1.0751881	1.1494587	1.1461912	1.285074	0.8783677	0.9883984	1.2490304	1.1080985	0.962097	0.7789582	0.8561424		
Zinc finger protein	0.80139434	0.967137	0.9269166	0.9467513	1.008149	0.9337736	0.97323064	0.94423795	0.8712403	0.99134576	0.9490585	0.9500951	0.91618416		
Calgranulin B2	0.81670403	0.8279605	0.8338373	0.9814225	0.94548655	0.78284645	0.96735203	0.8527429	0.68660533	0.73552938	0.6389162	0.8439342	0.9730548		
ID-1	1.0849609	1.0751164	0.8859676	1.0081654	0.9649399	1.172157	1.153884	1.160872	1.1738592	1.1359069	1.1631093	1.1715392			
Phase-1 RCT-92	0.9620701	0.8869293	0.81749076	0.7265886	0.72130245	1.4860952	0.81720635	0.9976957	1.0855591	1.1530167	1.2251908	1.2324997	1.1045401		
Phase-1 RCT-115	0.76676057	0.8098844	1.1519439	0.9094903	1.009252	0.8886194	1.1850416	1.3397177	1.3142586	1.2948036	1.2469487	1.223376	1.2578727		
Matrin F/G	1.2102444	1.2889786	1.1718001	1.2187382	1.4787639	1.1675302	1.2280709	1.233895	1.1326349	1.2895017	1.2039557	0.7044883	0.7401431		
Mut. homologue (MLH1)	0.9556832	0.9742227	0.8851123	0.98185473	1.0076896	1.0838594	0.94329555	0.95413095	1.0359821	0.96394595	0.9695296	1.2703246	1.0903034		
Phase-1 RCT-79	0.74328697	0.7713702	1.0343446	0.8110253	0.8408113	1.357705	1.0386515	1.0106294	1.2849432	1.1684184	1.0739051	0.9684017	1.0293635		
Sorbitol dehydrogenase	1.1258993	1.2606628	0.9952698	1.2823498	1.3262658	1.0451467	0.95114067	0.9743342	0.855875	1.0102849	0.87249496	0.8024248	0.8792823		
Phase-1 RCT-24	1.1307176	1.2480134	0.8827383	1.0667393	1.1271156	1.2423558	0.93595195	1.4813714	1.6392496	1.3259889	1.5383647	0.9570155	1.051441		
Calgranulin B1	1.0528626	1.2314786	1.095454	1.4241946	1.0590605	1.0814148	1.0652937	0.9751445	1.1417158	1.499153	1.0125271	0.79421836	0.80407745		
Elongation factor-1 alpha	0.9801853	1.0944589	0.8962084	1.093791	0.950287	1.1787244	1.0493758	1.025428	1.0840823	1.2337308	1.0939821	1.0740578	1.0924808		
L-glutamate-gamma-aminobutyrate oxidase	0.6397069	0.7580304	0.670371	0.6397245	0.772658	0.96059315	0.75596833	1.0267794	0.9258762	1.0382137	0.97312564	1.0264962	1.2316203		
Phase-1 RCT-33	0.9763591	1.0821173	1.1570456	0.9339307	1.212808	0.8485021	0.83716697	0.8621183	0.7999304	1.3622386	1.3848615	0.6922109	0.8129883		
c-Jun	1.0806813	0.9134379	0.653876	0.71141917	0.8104286	1.1973562	0.8445848	0.952452	1.0457715	1.0553969	1.1098399	1.0840188	1.3359737		
Phase-1 RCT-233	0.9264726	1.1017169	0.9258683	0.9367088	1.0598449	0.7668174	0.9716932	0.84119775	0.7624822	0.8541376	0.8035047	0.89854284	0.88918263		
Phase-1 RCT-242	0.81423876	0.80877485	0.8282714	0.8545437	0.8469437	1.1116988	1.1538302	1.100549	1.3282401	1.3140364	1.2169123	1.142951	1.1965293		
Phase-1 RCT-161	1.171687	1.1700705	1.0928146	1.0154092	1.0935737	1.1147672	0.97619708	0.98910711	0.9829947	1.0906028	1.1257153	1.0112641	0.97682434		
Phase-1 RCT-185	0.92351245	0.90348994	0.7178328	0.7532542	0.7056111	0.8959007	0.89125526	0.72297286	0.64822245	0.97276038	0.86231165	1.3714492	1.101825		
Phase-1 RCT-178	1.0299331	0.84012225	0.780566	0.83496215	0.84292257	0.94362848	0.88859165	1.0789137	0.82801825	0.97821313	0.85681975	0.8024248	0.8935874		
Phase-1 RCT-144	0.9665857	0.8624127	0.8728544	1.0502961	0.85488955	1.0228603	1.0277935	1.0088527	1.0088527	0.92406505	0.93711704	1.0155392	1.1018745		
ILK-a	1.0406927	1.1221793	0.7900326	1.0351249	1.0802478	1.2772547	0.8444832	1.2714325	1.311598	1.2245946	1.1809959	0.97141784	0.91538817		
Phase-1 RCT-225	1.055809	0.9776424	1.0474476	1.0536673	1.0779146	0.70494205	0.887168	0.8322121	0.64412345	0.6502419	0.5730928	1.076926	0.8331814		
60S ribosomal protein L8 (alternate clone 1)	1.0893371	1.21699	0.97310203	1.3840315	1.1102005	1.864069	0.9601462	1.3303138	1.6762054	1.7611654	1.5706066	0.8197872	0.863668		
Beta-tubulin, class I	0.89281997	0.98078185	0.59088033	0.71956843	0.7875911	1.0709851	0.7035567	1.5008382	1.5112339	1.2313545	1.233854	1.251168	1.9849289		
Multidrug resistant protein-2	0.95252924	0.9865633	1.2161293	1.2592383	1.0002177	1.390414	1.361758	1.3981218	1.5249064	1.3481936	1.3526287	1.02338	1.1054993		

Table 29

Phase-1 RCT-49	0.9188607	0.9226676	0.8637526	0.9955995	0.9908633	0.8584717	1.0142572	0.9212242	0.8944716	0.8914738	0.8458085	0.9005374	0.97881565
Calgranulin B3	1.0045576	1.1963958	1.2202424	1.2503719	1.2359508	1.4176707	1.1132253	1.3204041	1.9172126	1.5040355	1.5040355	0.97454774	0.97454774
NADP-dependent isocitrate dehydrogenase, cytosolic	1.1761235	1.2011366	0.8708404	1.200138	1.639205	0.960667	0.8002653	0.78248703	0.6664904	0.8765366	0.76803476	1.0874642	1.0622336
Octamer binding protein 1	0.9610705	1.1003891	1.1986394	1.017041	1.1206185	2.0425403	0.8969486	2.1380059	2.0356018	2.4833935	1.7481702	0.9957088	0.8854389
Sodium/bile acid cotransporter	1.1035293	0.8227954	0.4676893	0.5407399	0.82953024	0.43147758	0.86490008	0.5501635	0.5905081	0.3612221	0.4591997	0.6975928	0.8168582
Phase-1 RCT-174	0.80821495	0.9472386	0.7614706	1.0055421	0.9548963	0.85465005	0.8650287	0.89044523	0.82934004	0.91063154	0.85003398	1.3118658	1.2378584
Phase-1 RCT-77	1.1657331	1.1402133	0.5927671	1.0727483	1.007548	0.46844094	0.8263007	0.83984077	0.7768704	0.8924914	0.80966747	1.2597748	1.2101672
Inositol polyphosphate multikinase (pmk)4	1.2332034	0.7722422	0.41603515	0.5032315	0.6194832	1.30115388	1.2222569	0.9791482	0.8828216	0.89271687	0.86563158	1.4980425	0.890425
Phase-1 RCT-255	1.0287266	1.0267829	0.8192417	0.85397133	0.95928043	0.9612078	0.9343951	0.8622353	0.88817893	1.1777793	1.0157569	0.95938576	0.96746268
Equilibrative ribonucleoside triphosphate-sensitive nucleoside transporter	0.92443955	0.8377082	0.74950397	0.83477076	0.7928228	0.6147487	0.7964698	0.58849325	0.3968633	0.5255488	0.5012438	0.990347	0.8051648
CDK102	1.2209309	1.1735921	0.80741594	1.0521826	1.1242399	1.2018004	1.0128888	1.0189283	1.2485787	1.1901474	1.041217	0.8564659	0.92584433
Phase-1 RCT-209	0.8382675	0.8087604	1.2472715	0.8242073	1.0342845	0.766727	0.8295306	0.7633586	0.61470354	0.7474785	0.740865	0.9775442	0.8964035
NADH-cytochrome b5 reductase	1.1629078	0.9746817	0.76472807	0.7650102	0.3488658	0.72368306	0.9555653	0.78659346	0.70755637	0.7805528	1.0253376	0.89877226	0.89877226
Dynactin-1 (D100)	1.1071768	1.0250887	0.9369787	0.83273186	0.9573133	1.0419839	0.9254351	0.8604431	0.89289144	0.8810203	1.0125028	0.80970304	0.8558808
Serine/threonine protein kinase-30	1.1176964	0.9005888	0.86092304	0.87877047	1.114304	0.7518531	0.9580846	0.24383912	0.9009845	0.12461953	0.16778667	1.0460982	1.1221726
Phase-1 RCT-89	1.0946219	0.8981101	0.7878234	0.90688086	0.932035	0.8632377	0.82966446	0.8372636	0.8369398	0.86916008	0.82313204	0.8204704	0.84280735
Carnitine palmitoyl-CoA transferase	0.92144378	1.0596149	0.8805389	0.8907098	0.83787193	1.2171605	1.3648597	1.4178693	1.3737058	0.99240781	1.1180823	1.0688044	1.0428252
Alpha-2-microglobulin	1.075236	1.254017	0.4731546	0.44711518	0.69735605	1.4934936	1.2729481	1.2852225	1.2682313	1.5517788	1.2278763	1.0295542	0.7215471
Acidophorin CII	1.1006572	1.054559	1.0141109	0.85877043	1.0457902	1.0097816	1.041012	0.9882857	0.81321216	0.98570465	0.9889838	1.2155291	1.0541718
Cathepsin L, sequence 2	0.9187442	1.063295	1.325772	1.6998927	1.268042	1.1278893	0.7797205	1.0383381	1.1526314	1.1994022	0.8928828	0.8288714	0.812287
Phase-1 RCT-141	2.3570142	3.4748492	3.3231857	4.8327865	3.904397	0.9497877	0.9863081	1.0680087	0.98820838	1.0012814	1.0943815	0.7459462	0.7832313
Phase-1 RCT-289	1.2829828	0.95499766	0.76449766	0.734216	0.8596565	0.78344505	0.8623262	0.7723944	0.8312743	0.7763174	0.7640898	0.9333304	1.0682224
Endothelin-1	1.1486692	1.1508396	1.3465445	0.9454406	0.84289976	0.49786444	0.642778	0.5914478	0.63326047	0.87460994	0.78226194	0.9022728	0.926917
Phase-1 RCT-282	0.78946763	0.7118303	1.0134071	0.8221651	0.8770707	1.1126913	1.129539	1.0618352	1.1642276	0.9168768	0.9559118	1.0457143	1.0712075
Phase-1 RCT-140	0.9534631	1.0343523	1.1046199	1.0124578	1.1051724	1.2894878	1.0667271	1.1669207	1.65709251	1.3394581	1.416788	0.8821703	0.9589653
Cyclin D1	0.841392	0.7136121	0.88295513	0.53638448	0.5684594	0.8868921	1.1891131	1.0818427	1.4460018	1.2840378	1.0500374	1.1081469	0.951129
Phase-1 RCT-287	1.0873841	1.2361023	1.0568116	1.2371576	1.060394	0.91581846	1.043259	0.95586926	0.97021854	0.9105705	0.76337823	1.138699	1.051129
Phase-1 RCT-281	1.143911	1.251439	0.9262595	1.2278131	1.306317	0.6808624	0.9223145	0.6730667	0.56647605	0.9108303	0.5886727	0.741621	1.0153148
Receptor-binding protein (RBP)	1.3301706	1.1224504	0.7853137	0.9604808	0.95523934	1.1973971	0.8678764	1.1850426	1.0677011	1.1995751	1.120872	1.2005382	1.0832228
ATP-stimulated glucocorticoid-receptor translocation promoter (Gy6)	1.1486589	1.0943504	0.92415833	1.1281877	0.92620005	0.75275866	1.0492641	0.832634	0.5061629	0.6556175	0.649808	1	0.8364268
Phase-1 RCT-60	0.8888804	1.0207963	0.9213362	1.0897968	1.0216076	0.98714006	1.1033844	1.1965562	1.2586281	1.0970411	1.122817	1.0703992	1.2597832
Pyruvate kinase, muscle	0.7800984	0.902185	1.0471895	1.2491783	0.9838086	1.2887633	0.8414723	1.2635769	1.2105728	1.2433457	1.5893304	1.0172545	1.2189789
PAR interacting protein	1.054124	0.9345446	0.9905648	1.0633708	0.8708044	0.95789874	1.0499667	1.0014151	0.95355475	1.0086327	1.0243137	0.9178563	1.0712771
Nucleoside diphosphate kinase beta isoform	1.142893	1.4085383	1.1660791	1.5273639	1.5307045	1.0921172	0.882027	1.1286106	1.3731439	1.1276012	1.0549165	1.0344825	0.98568773
Gadd153	1.013138	1.1860693	1.1560538	1.1675631	1.0255171	1.2819445	1.1944822	1.1410551	1.4994215	1.1879808	1.3056116	1.2054005	1.1358725
Insulin-like growth factor binding protein 1	1.408841	1.4273657	1.1655009	1.1625943	1.3610075	0.96580653	0.9254802	1.0641761	1.0176388	0.95371838	0.97397095	0.943418	0.9609463
c-H-ras	1.2048857	1.4656397	1.3118485	1.378995	1.4539462	0.7347537	0.94246083	0.8874112	0.804673	0.7479881	0.70300907	0.9350114	0.72325706
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1.0513389	0.89526016	0.6630721	0.7701613	0.5906033	0.70973657	0.7082652	0.7082652	0.41800648	0.57728085	0.61811346	0.9580185	0.75225455
Phase-1 RCT-52	1.150223	1.012481	0.59283515	0.7931849	1.0802552	0.8279913	0.8894288	0.7676254	0.7786338	0.7683724	0.8377238	1.210434	0.9959314
Alpha 1 - inhibitor III	1.1048866	0.7858807	0.55278397	0.57809204	0.5393897	0.51709056	1.1284292	0.6118412	0.49552074	0.64555085	0.5538333	1.4102213	1.1390623
Sterol carrier protein 2	1.0309416	0.9823667	0.96672446	1.1973995	0.8878942	0.6661981	0.6865371	0.6865398	0.6457644	0.63709015	0.8321107	0.83367574	1.0140453
Organic anion transporter 3	0.94764566	0.91681343	1.076507	0.8376372	0.878915	1.2519689	0.88467814	0.7035693	1.2678725	1.0973067	1.0853355	1.2188452	1.1004206
Calgranulin B4	1.2082724	1.1203108	0.8383328	1.0171989	1.2223859	1.0542988	0.9639431	1.0238752	0.91697	1.1251256	0.95539945	1.0360569	1.1528017
Phase-1 RCT-182	1.2598532	0.9704608	0.86615868	1.0447692	0.9118685	1.0905079	0.98125007	0.83575203	0.8883732	0.95593727	0.85295835	1.0180123	1.0289796
Calgranulin B8	0.9207471	0.8108812	0.7963557	0.9047789	0.79255325	1.0900605	0.9114527	1.0774046	1.358833	1.1818432	1.235589	0.8724914	0.9650572
Aldehyde dehydrogenase, microsomal	1.2695749	1.9529906	1.0317665	1.2588202	0.9280458	1.0977849	0.9971354	0.8925377	0.8925377	1.0320721	1.001144	0.7487025	0.87841095
Phase-1 RCT-128	1.3334267	1.078281	0.96181706	0.7876903	0.9581407	1.0203385	0.83463925	0.9847881	0.9719171	1.0037056	1.0275246	0.84162277	0.91153806
Phase-1 RCT-102	0.9393332	0.51873606	0.39286873	0.39435538	0.6534954	0.91089097	0.6782553	0.51601034	0.6908931	0.7054934	0.927116	0.978448	0.978448
Protein phosphatase, sequence 2	1.0023577	0.7758774	0.5089981	0.5724365	0.725137	1.0308328	1.026269	1.0347441	1.0465282	1.1600777	0.9844789	1.3818153	1.2558538
Acidophorin AII	1.3423833	1.342044	1.3373176	1.7873654	1.9072245	0.5207469	0.7884834	0.48210308	0.48923616	0.5953412	0.4860268	0.65307074	0.59283775
Acidophorin AII	1.0653129	1.0538461	0.83501	1.0393397	0.9403702	0.8564081	0.935358	0.9081086	0.6196517	1.0148817	0.8700916	1.0938193	0.92528565
Phase-1 RCT-10	1.3178322	1.0065286	0.94962675	0.75137894	0.8244458	0.84574678	0.80186578	1.1255082	1.0186878	0.9366417	1.0271327	1.362412	1.2694705
Phase-1 RCT-48	0.9870098	0.7955531	0.83496736	0.65957605	0.74220204	0.8379938	1.128446	1.040728	0.86236893	1.0514843	0.95104825	1.4337853	1.417701

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Phase-1 RCT-188	1.2283272	1.2920707	1.0122651	1.2914813	1.0622012	0.8313901	1.0215638	0.90898385	0.7707748	0.91232056	0.8938018	0.8798043	1.0071242
Phase-1 RCT-189	1.0258602	1	0.87405284	1.3547597	1.1727022	0.8851571	0.6828343	0.89115354	0.9731806	1.1609735	1.240819	1.1831139	1.0365148
Beta-alanine synthase	1.568349	1.3903968	1.2206711	1.2557897	1.1727022	0.8851571	0.6828343	0.89115354	0.9731806	1.1609735	1.240819	1.1831139	1.0365148
Phase-1 RCT-286	0.7476022	0.47660735	0.25694763	0.2967772	0.27316362	0.51014346	0.7218407	0.3457433	0.5133543	0.45507237	0.58020166	0.85791844	0.906784
Carbonic anhydrase III	1.1372169	0.47653582	0.28861688	0.18494962	0.20783718	0.20708549	0.6864032	1.1580079	0.08602536	0.1409493	0.15004124	1.2480068	1.3518391
Phase-1 RCT-291	0.9332075	0.89580595	0.91391534	0.95131713	0.94247406	1.1581921	0.9001452	1.1296006	1.1174682	1.174682	1.076194	1.0859755	0.9858327
Carbonic anhydrase III, sequence 2	0.40687	0.9323242	0.603175	0.777827	0.349532	0.349532	0.9001452	1.1296006	1.1174682	1.174682	1.076194	1.0859755	0.9858327
Phase-1 RCT-271	0.8366124	0.9229604	0.7059657	0.4963457	0.7610422	0.95256203	0.84140754	0.97983654	1.1851102	1.055208	1.2778803	1.2728803	1.061615
HM-CoA synthase, mitochondrial	0.8165188	1.0055533	0.8417578	0.8771211	0.340867	1.128801	1.3702668	1.688407	1.5119076	1.4535002	1.91709205	1.3645242	1.2408758
Phase-1 RCT-189	1.114452	1.2307031	1.0198687	1.0472288	1.213693	0.8410226	1.3702668	1.688407	1.5119076	1.4535002	1.91709205	1.3645242	1.2408758
Phase-1 RCT-40	1.1720355	0.9759463	0.8401215	0.87254435	0.8762628	0.93371122	0.9971122	0.93371122	0.93371122	1.0553341	0.97258084	1.0019005	0.97100032
Urinary protein 2 precursor	1.1284551	0.98195634	0.9853018	0.82392615	0.63316505	0.55984177	0.7400384	0.52446467	0.38736087	0.4856473	0.50803246	0.71140593	0.7100032
Paraoxonase 1	0.9117747	0.79010634	0.59728104	0.73381647	0.73381647	0.59330034	0.73381647	0.59330034	0.73381647	0.59330034	0.73381647	0.59330034	0.73381647
Phase-1 RCT-152	1.158351	0.85346826	0.36454397	0.6956245	0.7067674	0.5984179	0.83426894	0.505393	0.389705918	0.44398743	0.46888888	0.7139377	0.581012
Liver fatty acid binding protein	1.080808	0.78908174	0.5510523	0.5650878	0.5153295	0.48736048	1.26344	0.8183067	0.864381918	0.6318533	0.55165077	1.439539	1.1508044
Phase-1 RCT-38	0.9110029	0.8498891	0.78131175	0.8573137	0.8862575	1.079758	0.857872	0.8380894	0.8614574	0.87121803	0.87335767	1.2802017	0.80818677
Phase-1 RCT-270	1.3081051	0.9844962	0.92687284	0.84203523	1.0507302	0.8232455	1.0866072	0.8380894	0.8614574	0.87121803	0.87335767	1.2802017	0.80818677
Transferrin	1.0226023	0.8438274	0.3471057	0.47231176	0.5059201	0.5974784	1.007511	0.6963937	0.85085365	0.5647217	0.60172385	1.2802017	0.80818677
Hepatic lipase	0.8205795	0.824792	0.6543936	0.821842	0.850928	1.0539837	0.662697	1.24715	0.8159776	1.2827581	1.3763338	0.89510657	1.088205
Phase-1 RCT-117	1.0359992	0.8502706	0.7090345	0.812282	0.9399684	0.6755344	0.6574937	0.62639646	0.8995761	0.6085627	0.58013733	0.8410449	1.0189394
Phase-1 RCT-175	1.148423	1.1240333	0.83352145	0.896329	1.487847	0.88356766	0.70457405	0.8635302	0.8457098	0.8530837	0.69925433	0.9814768	1.1962621
Phase-1 RCT-137	1.5104566	1.3473152	1.280764	1.3926329	1.0019233	0.89750203	1.1049553	0.96422774	0.84398516	0.8620257	0.86571123	1.2606784	1.1498873
Phase-1 RCT-175	0.88942873	1.0837882	0.9710498	1.1542249	1.0019233	0.89750203	1.1049553	0.96422774	0.84398516	0.8620257	0.86571123	1.2606784	1.1498873
Melanoma-associated antigen ME491	0.9102572	1.0254031	0.8052335	0.8817845	0.8691393	1.1748888	0.86834633	1.2889095	0.9685929	0.91070384	0.9089822	1.1713469	0.962049
Phase-1 RCT-152	0.99307036	1.0813404	1.0562707	1.4261672	1.0665971	1.0183005	0.84096324	0.85180026	1.2250648	1.099514	1.220174	1.0377959	0.9862049
14-3-3 zeta	1.008231	1.1158351	0.98164254	1.1151539	1.0103863	1.1247512	1.1077594	1.2318062	0.2952821	0.5013147	0.47553447	0.89407655	0.8875265
Cytochrome P450 2C23	1.087537	0.9182776	0.71258247	0.86191214	0.87765876	0.40878305	0.61470305	0.34091064	0.2952821	0.5013147	0.47553447	0.89407655	0.8875265
Voltage-dependent anion channel 2 (Vdac2)	1.0427506	1.0501938	0.84768004	0.8633425	0.85865336	1.1766588	1.0431111	1.1205034	1.2532245	1.1271888	1.0429481	0.96884897	0.9548269
Phase-1 RCT-154	0.9002547	0.94119155	0.923289	0.99318737	1.0141933	1.175152	1.088165	1.046813	1.0385841	1.040214	1.0207228	0.9850269	1.0556668
Superoxide dismutase Mn	1.3136895	1.4579132	1.4575801	2.0912316	1.9115899	1.3760295	1.1935889	1.2892783	1.5193555	1.2704139	1.2275697	1.1046427	1.082655
c-myc	0.9413008	1.2570727	1.2432101	1.2089269	1.163968	1.2891678	1.3219734	1.4367251	1.4352366	1.5724199	1.5278071	1.1741862	1.1749376
Phase-1 RCT-196	0.98868734	1.0310551	0.7928089	0.8070557	0.9781824	1.3587743	1.428435	1.244808	1.1353271	1.427053	1.168502	0.9468894	0.908353
Cyclin G	0.9439414	1.0605663	1.2003452	1.1318227	1.0697398	1.348115	1.2312953	1.1527976	1.892217	1.082068	1.1678805	1.2959547	0.85777235
Calgranulin B5	0.83043927	0.67963355	0.8993797	0.9172869	0.8905164	1.276838	1.0206426	1.2038026	1.4908265	1.2789482	0.8972056	1.0532717	1.3002073
p53	1.1289703	1.131571	1.154535	1.308938	1.0153068	1.0691621	0.9087669	0.986008	0.86359847	0.8972056	1.0110146	0.97125274	0.9827684
Phase-1 RCT-205	0.9160821	0.84452383	1.0272211	1.1299479	0.9905042	1.0267532	1.010111	1.0203989	1.0370837	0.9498981	1.0040882	1.077103	1.1246315
Phase-1 RCT-48	1.0785478	1.0822141	1.0803603	1.2140108	1.1720673	1.2886081	1.1684928	1.2685768	1.4107143	1.161459	1.1425786	1.0827061	1.0881326
Caspase 3	0.7601255	0.8322655	1.518375	1.5028728	1.5175288	1.1537789	1.1681061	0.7429723	1.0208973	0.7439955	0.80212754	0.75683817	0.6807896
Alpha-tubulin	1.0215372	1.0436516	0.99436394	0.98838286	1.1711692	1.1731625	0.8650032	1.2524518	1.3389123	1.07709	1.3332914	0.86814647	1.1037214
IgE binding protein	1.254815	1.6737267	1.3718643	1.712427	1.5988841	1.2663463	1.1912573	1.2523277	1.1856581	1.3982538	1.2243726	0.772004	1.0970287
Phase-1 RCT-39	0.8490759	0.92139715	1.1300605	1.106405	1.1751588	1.1731625	0.8650032	1.2524518	1.3389123	1.07709	1.3332914	0.86814647	1.1037214
Coilin	0.9018081	0.89568304	0.667621	0.82044315	0.82486334	0.926928	1.0216201	0.9282548	0.9462159	1.084842	0.9711917	1.4546252	1.2185714
Heme oxygenase	1.01958	1.138625	1.007648	1.2854139	1.425625	0.5271825	1.1013604	0.7973837	0.6171483	0.8303521	0.5957731	0.91432355	1.2185714
Phase-1 RCT-241	0.7859155	1.4552926	1.3767824	2.2789394	2.1868176	1.0308824	0.9648197	1.0321845	1.2294187	1.3326836	1.3074819	1.0141214	0.9572189
Ribosomal protein S9	1.2279115	1.4277323	1.1868401	1.3671156	1.134393	1.1485845	0.9454855	1.0321845	1.2294187	1.3326836	1.3074819	1.0141214	0.9572189
Phase-1 RCT-258	0.902467	0.8789593	0.9855705	0.9703738	0.8009441	0.8940819	1.0029348	1.0519202	1.0480452	1.0738331	1.0845735	0.8684234	0.9438733
Angiotensinogenase lyase	1.1377484	1.1941922	0.6948877	1.0419337	0.9429498	1.0438652	1.2862258	1.1258215	1.0457697	0.8892027	0.8361498	1.073455	0.8927877
Phase-1 RCT-180	0.92152755	1.100165	1.0685346	1.0267407	1.2216153	1.0371787	1.0384779	1.1908523	1.049871	0.9657126	1.0740785	0.9564257	1.1608838
Midline resistant protein-1	1.0017997	1.1590967	0.871948	0.9277653	1.0204519	1.0383958	1.5686658	1.5602114	2.012833	1.7821885	1.5754657	1.3874928	1.3881731
Onlinine decarboxylase	0.6631284	1.0292185	0.8723652	0.9940076	0.8676066	1.313035	1.2811238	1.3899722	2.094082	2.0977168	1.8710811	0.7017648	0.72374135
Thymosin beta-10	1.108308	1.275565	1.218232	1.1643329	1.2355555	1.5120194	0.83674276	1.8898222	1.9381488	1.9381488	1.9381488	1.9381488	1.9381488
Phase-1 RCT-72	0.7182385	0.7508048	1.046237	0.9083128	0.880883	1.2194732	1.0844666	1.0833468	1.3614608	1.1481786	1.0630473	0.8275208	1.0419257
Phase-1 RCT-108	1.3386493	1.8088182	1.0175283	1.5332206	1.357719	1.631275	0.91258013	1.0456504	1.184129	1.0223848	1.0825773	0.6204047	0.7132627
Phase-1 RCT-76	1.2741594	1.2366216	1.011041	1.1457105	1.0970885	0.9689839	1.0060817	1.006227	1.0537629	1.1246393	1.027711	0.7633197	1.071458
Vacuole membrane protein 1	1.0305845	1.0908854	0.76286864	1.1335929	0.92116827	0.7004615	0.8428439	0.52266815	0.6573218	0.5079654	0.86743324	0.88018608	

Table 28

Phase-1 RCT-158	0.8245005	0.84538394	1.0228941	0.95219314	1.0010184	1.1501331	1.0041609	1.0401357	1.223751	1.1997390	1.0857697	0.9035127	0.9819402
Phase-1 RCT-113	0.97182	1.3002002	1.1965836	1.4537338	1.6250739	1.091303	0.94912654	1.0210889	1.1858772	1.1438988	1.0684694	0.8689893	0.9526948
Endogenous retroviral sequence, 5' and 3'	1.3551219	1.1728796	1.219849	1.439765	1.1036044	1.485529	0.895126	0.9100284	0.9278592	1.1088786	0.9358371	1.0346006	0.77154287
LTR													
Beta-actin	1.1084727	1.1757787	0.9432045	1.2399414	0.9669534	1.0199512	1.0837424	1.2853558	1.9535504	1.0538042	1.4361104	0.98050286	1.0174677
Phase-1 RCT-65	0.8041676	0.9139243	1.0784854	1.0165388	0.96494468	1.1604254	1.2680113	1.3825969	1.3287864	1.3053271	1.3071054	1.113921	1.0977235
MHC class I antigen RT1A1(α) alpha-chain	0.83156604	0.98434087	1.097573	1.0197882	1.059352	0.897892	1.1280353	1.2531792	1.3266507	1.3722026	1.3848978	1.1174863	1.197795
Bax (alpha)	0.97553045	1.1394238	0.49884474	1.0980015	1.0687909	1.3836203	1.5180525	1.557838	1.5934169	1.464502	1.5639585	1.2808216	1.2574457
Carbamyl reductase	0.8571164	0.92556515	0.98085344	0.881352	0.9532288	1.1022089	1.0038049	1.0590098	1.2480377	1.0275369	1.1888652	1.0489371	1.0584193
Beta-actin, sequence 2	1.3862241	1.2667368	1.0574532	1.2597544	0.9934274	1.0022897	1.0091155	1.1262896	0.9433262	1.0830082	1.0020446	0.7523173	0.92014027
Interleukin-10	1.1261995	1.2667071	1.1362816	1.180035	1.0285589	1.2447938	1.1982888	1.2673883	1.2053832	1.1478766	1.0864506	1.1209537	1.0838162
Phase-1 RCT-191	0.819453	0.9079983	0.8570923	0.9070302	0.8206388	0.8987376	1.1407268	1.1853819	1.1184291	0.98501825	0.8941214	1.2241559	1.3598039
Phase-1 RCT-111	1.2927178	1.2180213	0.93238834	1.0775315	1.0878582	0.98778684	1.0195788	1.0716122	1.0303217	1.0369052	0.99287047	0.7447676	0.90530658
Apoptosis-regulating bcl2 protein	1.0992397	0.98781735	0.74522086	0.8653969	0.97777075	1.0745504	0.8074797	0.91447943	0.831048	1.0513117	0.924849	0.9340478	0.8850107
Glutathione peroxidase	0.9709976	0.6348981	0.37777272	0.5252379	0.60250086	0.41160108	0.8950009	0.33638682	0.43280676	0.40953097	0.3594439	0.8928692	1.3040823
Phase-1 RCT-57	0.93994335	0.8391464	0.9086711	0.81164956	0.7864884	1.2491986	1.3014317	1.5840556	1.8845156	1.7338325	1.5355486	1.2516769	1.2414868
Tryptophan hydroxylase	1.0330493	1.0724406	0.9594587	1.2165942	1.1374114	0.84416724	0.7803571	0.8878337	0.65719867	1.0014374	1.0846967	1.087328	0.9704294
Sulfotransferase K2	0.9614731	0.76186694	0.861463	0.764927	0.7474815	1.1997183	0.8963355	0.8868321	1.1006608	1.0223355	1.083723	0.9716157	0.98015586
Calgranulin B9	0.920428	0.8113846	0.91672796	0.7972524	0.8483384	1.0424395	0.9723459	0.97086948	1.1874835	1.068932	1.0515445	1.1134478	1.0472155
Phase-1 RCT-123	0.94581276	0.9414672	1.1219648	0.9344605	1.0065897	1.032389	1.0735104	1.523892	2.0524304	1.8776593	1.4716297	1.2723398	1.1523595
Phase-1 RCT-88	0.9501401	0.9882248	0.9405958	0.9452867	0.98184975	1.5122837	1.2664871	1.5238241	1.0059326	0.9026322	0.9102765	1.083147	1.1416555
Aquaporin-3 (AQP3)	0.8053244	0.86782247	0.697952	0.84386473	0.80333568	0.985961	1.038813	1.0198241	0.8188581	0.5401845	0.628873	1.1634119	1.7371675
Stearyl-CoA desaturase, liver	0.40879953	0.57563408	0.113544256	0.0595092	0.17605068	0.34769202	0.8644485	1.0509335	0.8188581	0.5401845	0.628873	1.1634119	1.7371675
Phase-1 RCT-84	0.9289723	0.9570798	0.7664407	0.683589498	1.0274258	1.1499693	1.0354106	1.0481336	1.088807	1.046755	0.9903115	1.0084234	1.0842452
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes=ncr,													
necrosis observed; yes=both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 29

Table 28. Expression Data for 24 Hour Timepoint (1)															
Compound-Dose (2)	DIF 25	DIF 100	DIF 100	DIF 100	DIF 100	DOX 12	DOX 12	ERY 40	ERY 40	ERY 40	ERY 180	ERY 180	ERY 160	ERY 160	EST 0.4
Animal Number (3)	no	254	255	256	257	1254	1255	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)															
Gamma-actin, cytoplasmic	0.9845947	0.9753384	0.9208074	0.9002559	0.95343276	0.7112135	0.81713045	0.84032726	0.5834105	0.70894665	0.5834105	0.70894665	0.5834105	0.70894665	0.1871346
Phase-1 RCT-145	1.1301882	1.0904553	1.2827536	1.1535939	1.5768801	1.1468866	0.92607486	0.8437133	0.9145744	0.6563539	0.6418889	0.79023767	0.8150347	0.6418889	0.8150347
Gad45	1.0562271	1.1915442	0.906083	1.056604	0.96392314	1.0131279	1.3048751	1.0914378	1.0743146	1.145496	0.99779034	0.93706155	1.162525	0.9964949	0.83706155
Phase-1 RCT-78	1.0662271	1.1815442	0.790083	1.056604	0.96392314	1.0131279	1.3048751	1.0914378	1.0743146	1.145496	0.99779034	0.93706155	1.162525	0.9964949	0.83706155
Fas antigen	0.881792	0.950752	0.9128254	0.95399106	1.3586603	1.3594425	1.2873343	0.865862	1.2765287	1.4816856	1.0371265	1.1640005	0.9685182	1.4816856	1.0371265
Macrophage inflammatory protein-2 alpha	1.0497901	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354	0.9137354
Integrin beta1	0.9904251	0.8444621	0.88285615	0.8413037	1.1281448	1.2118812	0.9654173	0.884865	1.2043077	0.9796714	1.0720333	0.9714794	0.8951974	0.9796714	1.0720333
Phase-1 RCT-207	1.0766408	0.7467794	0.9488957	1.077221	0.9484044	1.1706065	0.7424223	0.71274668	0.6874069	0.82958725	0.8243758	0.61800285	0.82958725	0.8243758	0.61800285
Aspartate aminotransferase, mitochondrial	0.7839273	1.012397	1.098802	1.008178	0.92427835	1.3692247	0.8252609	0.67269146	0.6372305	1.162607	1.0661764	1.1039043	1.162607	1.0661764	1.1039043
Caseln-alpha	1.4848834	1.1657082	1.1498065	1.1745426	0.8558877	0.8210029	0.5841139	1.0204809	0.61913246	0.7949602	0.8231848	0.6738884	0.7949602	0.8231848	0.6738884
Malic enzyme	2.010153	0.984226	1.197768	1.1382847	0.8512079	0.86138454	0.8053735	0.8226769	0.52541538	0.3851185	0.54261756	0.39643005	0.54261756	0.39643005	0.39643005
Phase-1 RCT-30	1.5465015	0.79822177	0.9688711	0.93554484	0.8294667	0.6287108	0.80822206	0.8811627	0.82127	0.7737975	0.85020214	0.5845061	0.7737975	0.85020214	0.5845061
Hepatocyte growth factor receptor	0.8949935	0.8609314	0.8487038	0.860647	0.87703636	1.440621	0.80822206	0.8811627	0.82127	0.7737975	0.85020214	0.5845061	0.7737975	0.85020214	0.5845061
MAP kinase kinase	0.95828	0.9533388	0.90162205	0.80702724	1.1288084	1.2785695	0.8532867	0.83184137	0.9445063	0.9358709	0.48687708	0.995311	0.9358709	0.48687708	0.995311
Sodium/glucose cotransporter 1	0.68924266	1.2631154	1.4800588	0.6058743	0.63430334	1.1287601	1.1842525	1.2361148	0.7275748	1.9585137	1.7374471	1.8867441	1.9585137	1.7374471	1.8867441
Phase-1 RCT-27	0.5550205	0.6329358	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743	0.6058743
Phase-1 RCT-50	1.3020525	1.0947018	1.134381	1.1388752	0.88817617	0.94710286	0.5152757	0.9584645	0.6806466	0.7385512	0.85531106	0.5807592	0.7385512	0.85531106	0.5807592
Phase-1 RCT-192	0.81595355	1.0317818	1.0313817	0.98084084	1.0844675	0.89543524	0.8644448	0.77897197	0.9775404	0.93064374	1.0534642	1.1018441	0.93064374	1.0534642	1.1018441
Phase-1 RCT-288	0.80184588	0.77469075	0.83449854	0.8327668	0.8631547	0.65147895	1.0786632	0.7213675	0.7222587	1.625849	0.6033554	0.74083143	1.625849	0.6033554	0.74083143
Phase-1 RCT-37	0.9016812	0.9902634	0.99599994	0.9656274	1.0449872	1.0957305	1.0786632	0.7213675	0.7222587	1.625849	0.6033554	0.74083143	1.625849	0.6033554	0.74083143
Organic cation transporter 3	0.68142664	0.8090365	0.92758474	0.90314835	1.4971648	1.5980235	1.0786632	0.7213675	0.7222587	1.625849	0.6033554	0.74083143	1.625849	0.6033554	0.74083143
60S ribosomal protein L6	0.7029315	0.8469934	0.92746365	0.90051323	1.4460454	1.5024986	1.2947186	0.80960435	1.3281594	1.3582761	1.3897492	1.3923753	1.3582761	1.3897492	1.3923753
Zinc finger protein	0.9336498	0.8931084	1.0459732	0.9855275	1.0369691	0.96553676	0.5982894	0.68608207	0.6835593	0.9211642	0.6985992	0.90009806	0.6985992	0.90009806	0.90009806
Calgranulin B2	1.013883	1.0054682	0.92542714	0.88774544	0.8456205	0.8144213	1.0140498	0.92730927	1.2037878	1.0156177	0.87572084	1.049296	1.0156177	0.87572084	1.049296
Phase-1 RCT-92	1.250535	0.92166815	0.9525418	1.0068107	1.0157502	1.5514625	0.8618903	0.7703483	0.8531873	0.735415	0.8118457	0.6086817	0.735415	0.8118457	0.6086817
Phase-1 RCT-115	0.87879828	0.9841723	0.7470164	0.9490318	0.7962785	0.775983	0.40418276	0.96380004	1.4675742	1.1634725	1.1674687	1.3972794	1.1634725	1.1674687	1.3972794
Matrin F1G	1.639739	1.0114955	1.3357266	1.1759952	0.7485084	0.775983	0.1015736	0.925684	1.0159781	1.2375278	1.1844698	1.2189197	1.2375278	1.1844698	1.2189197
Phase-1 RCT-79	1.1228796	1.038397	1.0655627	0.96203604	0.9012452	1.1846628	1.089792	1.4119402	1.2482425	1.2307322	1.0243425	0.87398852	1.2307322	1.0243425	0.87398852
MitL homologue (MLH1)	1.1883115	0.6955902	1.007627	0.95343009	0.9898845	0.8324709	0.7493838	1.1665455	0.7270707	0.8762715	0.88317394	0.71742153	0.8762715	0.88317394	0.71742153
Sorbidol dehydrogenase	0.8742883	1.0131712	1.031558	1.0733597	1.3096789	1.1398464	0.87331858	0.4596398	0.92380273	0.84941427	0.6712122	1.3262224	0.84941427	0.6712122	1.3262224
Phase-1 RCT-24	1.5861284	1.2956191	1.5939881	1.5034037	0.8490228	0.8597124	0.6398526	0.408829	0.6289151	0.6491427	0.6712122	1.3262224	0.6491427	0.6712122	1.3262224
Calgranulin B1	0.8283518	0.8061503	0.8942968	0.9690584	1.0238695	1.1695209	1.2474004	0.9480777	1.3199504	1.2563361	1.1903315	1.0827103	1.2563361	1.1903315	1.0827103
Elongation factor-1 alpha	0.8293921	0.97413	1.0184639	1.1455259	1.1117885	1.5073308	1.3638898	1.2598837	1.5789334	1.5488823	2.0097537	1.693962	1.5488823	2.0097537	1.693962
Lactone-gamma-lactone oxidase	1.3397641	0.92172786	1.2478249	1.0314366	0.63131624	0.5920211	1.3638898	1.2598837	1.5789334	1.5488823	2.0097537	1.693962	1.5488823	2.0097537	1.693962
Phase-1 RCT-33	0.9065056	1.020057	0.94307435	0.9053095	1.0724941	0.772337	1.849916	0.87267256	1.673844	1.1651813	1.1581932	1.4595691	1.1651813	1.1581932	1.4595691
GJun	1.458878	1.082888	1.242688	1.3004484	0.8220823	1.018781	0.7979035	1.1496426	0.9088701	0.890342	0.890342	0.8164377	0.890342	0.890342	0.8164377
Phase-1 RCT-233	1.3434675	1.0194436	0.84192103	1.1580352	0.58097847	0.7163761	1.1859951	0.7590257	1.1177848	0.9616723	0.97176814	1.1412898	0.9616723	0.97176814	1.1412898
Phase-1 RCT-36	1.0875279	1.0632105	0.9253319	0.9847777	0.9433672	0.7948577	0.6898842	0.5412218	0.56821667	0.98986655	0.79499036	0.8210483	0.98986655	0.79499036	0.8210483
Phase-1 RCT-242	1.5524218	1.2468484	1.3147545	1.3025866	1.4110525	0.94933466	0.6898842	0.5412218	0.56821667	0.98986655	0.79499036	0.8210483	0.98986655	0.79499036	0.8210483
Phase-1 RCT-181	1.1123165	0.93555415	0.8697043	1.0504079	0.9068765	0.73002064	0.91705	0.82063	0.83954346	0.8340051	1.0709483	0.9943795	0.8340051	1.0709483	0.9943795
Phase-1 RCT-185	0.8808893	1.1570312	1.288035	1.056815	0.7479717	0.8242129	0.94755894	0.7308424	0.9092249	0.8517707	1.090487	1.2458787	0.8517707	1.090487	1.2458787
Phase-1 RCT-179	0.7074234	0.8733484	0.9279275	0.8531704	1.3983594	1.0014902	1.3148415	0.7043766	0.9626251	1.5324435	0.48022314	1.3262224	1.5324435	0.48022314	1.3262224
Phase-1 RCT-144	1.1295192	1.2953198	1.1583499	1.158755	1.124239	1.0434558	0.8758742	0.7410977	0.7893088	0.8380975	0.9137684	0.80504614	0.8380975	0.9137684	0.80504614
ILB-a	0.8847584	1.0159202	1.0271039	1.1171277	1.191852	1.8017546	0.78485598	0.73533604	0.81497514	1.1345508	0.9818451	1.478893	1.1345508	0.9818451	1.478893
Phase-1 RCT-225	0.86502743	0.9891004	0.8053892	0.85022186	0.42821595	0.60792265	1.3864578	1.2612184	0.9235878	1.2612184	0.9235878	1.2612184	1.2612184	0.9235878	1.2612184
60S ribosomal protein L6 (alternate clone 1)	0.788359	1.0216589	0.9708834	0.8818858	0.8818858	1.1887455	1.3267968	1.3866653	1.5033104	1.5365924	1.8075202	1.8546329	1.5365924	1.8075202	1.8546329
Beta-tubulin, class I	1.9077431	0.98034046													

Phase-1 RCT-49	1.0496999	1.1463145	1.0566967	1.0639055	1.0551783	0.9813357	1.1229011	0.70078593	0.9866285	0.87087604	0.9094061	0.87728107	0.84981835
Calgranulin B3	1.0657272	0.9338867	0.94990325	1.0747455	1.0599652	1.2984336	0.9974928	0.75268455	0.8738437	0.9090605	0.8904017	0.9532862	1.0532862
NADP-dependent isocitrate dehydrogenase	0.8221185	1.11310	0.99800443	0.9249451	0.8428852	0.9602853	0.7077278	0.9833589	1.5472912	1.2242552	1.8005663	1.1809169	
Orotidic	0.948522	0.885006	0.8978531	0.8212372	0.8256007	0.92556316	0.98724836	1.4576346	0.89750355	1.1269599	0.934388	0.7875929	0.97645596
Oxyster binding protein 1	0.6845965	0.9376078	0.9386273	0.7201437	0.7137378	0.9612484	0.80721728	1.2932681	2.9010882	2.097394	0.9115224	1.4216633	1.3401401
Sodium-dependent acid cotransporter	1.1965651	1.2314078	1.2078274	1.2030323	0.7681459	0.9654056	0.80327314	0.7653621	0.9070075	0.9025396	0.904584	1.292167	
Phase-1 RCT-77	1.0688751	1.1634643	1.1012257	1.1366285	0.79124006	1.039195	0.85993946	0.8226712	0.98155665	0.80763555	0.8331276	0.9303151	1.3125196
Inositol polyphosphate multikinase (IpMK4)	0.71128017	1.4137381	1.2268803	1.281418	0.9826569	0.7432373	2.5558458	1.8628684	3.0068933	1.4905667	1.7113597	1.8781348	2.1983668
Phase-1 RCT-256	0.9182549	0.9607895	1.0277827	0.98799294	0.6277827	0.75940937	2.2057862	1.4984442	2.2053957	1.5591078	1.5897113	1.5582178	1.0741428
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.79978347	0.89845616	0.7862143	0.7094553	0.8672844	0.99430144	1.2591829	1.2500876	1.3061357	0.74548095	0.8764174	1.1434855	
CDK102	0.8653665	1.0951256	1.0655168	1.0330065	0.92219514	0.8876285	1.306551	1.3602637	1.339011	1.2336003	1.3159884	1.1386781	
Phase-1 RCT-209	0.9283878	0.99077064	1.0641462	0.9635988	0.86508105	0.8578967	1.0189815	0.9624992	1.339215	1.154283	1.1808035	1.3193188	0.9160783
NADH-oxochrome b5 reductase	1.0863786	1.2155377	1.2548237	1.2503247	0.9387091	0.5738726	0.789344	0.9675098	0.6079659	0.7207519	0.7140048	0.9185089	1.1847454
Dynamin-1 (D100)	0.7601103	0.91612744	0.7210858	0.85770273	0.7402272	0.8494076	1.925274	1.4394305	1.7830293	1.1912495	1.1577648	1.4523342	1.1327395
Sensory marker protein-30	0.6560196	1.1076238	1.0750107	0.80798259	0.8753206	1.0880922	1.7453419	1.8887128	2.0194868	1.7917244	1.4273145	1.0728071	1.7557583
Phase-1 RCT-99	0.79287267	0.9593717	0.8756584	0.8525919	0.60733473	0.73443234	1.920813	1.6473448	2.3659704	1.6974288	1.2814408	1.8845182	1.1542516
Camitine palmitoyl-CoA transferase	1.4215988	1.1251553	1.4755423	1.1540862	1.487689	1.1172764	0.74569194	0.9330917	0.9034512	0.6441882	0.83351905	0.7087873	0.6746408
Alpha-2-microglobulin	0.8190878	0.8436073	0.85176395	0.7939995	1.2637137	0.670557	1.433885	1.0070012	0.99007108	0.9165927	0.61208875	0.72452116	1.4078329
Adiponectin C11	1.0346655	1.1327796	1.2287922	1.0859468	1.3784631	1.386772	0.9528867	1.115581	1.1459274	0.7022407	0.7688034	0.92870735	1.5328379
Catharsin L sequence 2	0.8716458	0.9307667	0.92119014	0.8307842	1.4108573	0.9150278	1.0718783	1.311442	1.4819658	1.8974347	0.7693378	3.4604926	0.7184176
Phase-1 RCT-141	0.8401357	1.04981	1.0355375	1.0453228	1.3475804	3.644163	1.9478967	1.587917	1.9542758	0.9897897	0.8168762	1.0386663	1.3585965
Phase-1 RCT-289	0.8332412	1.0838839	0.85147663	0.7573067	0.8035564	0.7283978	1.4534383	0.9184087	1.56133	0.9897897	0.8168762	1.0386663	1.3585965
Endothelin-1	1.1492955	0.9205761	0.985056	0.8000453	1.1563579	1.0253247	0.69303826	0.76376914	0.80452485	0.628405	0.77766916	0.6245192	0.67841977
Phase-1 RCT-140	1.3410955	0.9218224	1.0812023	1.034685	0.8885895	0.8187075	0.73839876	1.1277374	0.64334788	0.95578307	0.8103441	0.68844916	0.826731
Cyclin D1	0.96390356	1.0396464	1.0973172	1.0665128	0.789476	0.9007708	1.2133664	0.9556779	0.7073421	0.7442302	0.9148121	0.73514926	1.3440172
Phase-1 RCT-287	0.86942221	0.8644876	0.73271054	0.96390356	1.0396464	1.0973172	1.0665128	0.789476	0.9007708	1.2133664	0.9556779	0.7073421	1.3440172
Phase-1 RCT-281	0.7946978	1.3946306	1.468676	0.9433083	1.2243329	0.8895871	1.4747527	1.4382583	1.12889	1.2142277	1.4829142	1.4481272	1.5939444
Retinol-binding protein (RBP)	0.7946978	1.3946306	1.468676	0.9433083	1.2243329	0.8895871	1.4747527	1.4382583	1.12889	1.2142277	1.4829142	1.4481272	1.5939444
ATP-stimulated glucocorticoid-receptor	0.7946978	1.3946306	1.468676	0.9433083	1.2243329	0.8895871	1.4747527	1.4382583	1.12889	1.2142277	1.4829142	1.4481272	1.5939444
Transcription promoter (Gy4)	1.2877758	1.1862127	1.1637993	1.2095279	1.0983328	1.428693	0.7773729	0.595055	0.7038553	0.9963528	0.9788482	0.7978531	1.2566281
Phase-1 RCT-60	1.7559134	0.8935557	0.89918543	0.83377737	0.81893235	1.0324525	0.761744	1.1551427	1.057123	0.749812	1.1219273	1.0952286	0.8073222
Pyruvate kinase, muscle	1.0350841	1.2932757	1.3033093	1.1574073	1.3690559	1.0953247	0.8671227	0.72016727	0.9708334	0.9441991	1.0625031	0.9041694	0.9883717
PAR interacting protein	0.91411898	1.2014649	1.2682381	1.1260656	0.86628014	1.388898	1.1031327	1.0152477	1.0638169	0.93228665	1.3054498	1.090787	1.131739
Nucleoside diphosphate kinase beta isoform	1.3992534	1.088144	1.2021248	1.2694658	1.7198167	1.7340665	0.9036881	1.0574546	1.1207694	1.0782987	0.87574786	0.7575757	0.7977565
Gadd153	0.6940662	0.82376225	0.7078913	0.65515804	1.3940378	0.8652287	0.9195065	1.0170423	1.3417126	1.4057484	0.8920356	1.0410596	1.0447339
Insulin-like growth factor binding protein 1	0.75215554	1.0742891	1.0853562	1.0155398	1.0476233	1.6221459	0.8271519	0.7747231	0.9327556	1.2555654	1.4023541	1.2206491	0.81715788
C-H-ras	0.63866566	0.9688804	0.8405594	0.76021683	0.76598936	0.9505644	1.8756074	1.8997283	2.1344118	1.8403942	0.9741614	1.354081	1.2011105
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.8959346	1.2379711	1.3725272	1.2833401	0.43398395	0.93855186	0.92397696	1.8030474	0.9093986	0.7703884	0.6152932	1.1428844	1.302945
Phase-1 RCT-52	0.83182305	1.4007106	0.8277981	1.1251445	0.97341863	0.77680403	1.464841	1.8750519	1.4688511	0.83725556	0.747706	1.4316047	1.7412591
Alpha 1 - inhibitor III	0.8185799	0.97614247	0.9352818	0.89192613	0.86857234	1.0243411	1.5808119	1.132118	2.09583	1.5110889	2.0090313	1.9241412	0.78366214
Serol carrier protein 2	1.070038	1.0221021	1.0430906	1.0006036	1.033883	0.94072837	0.9400304	1.2312672	0.8949014	0.6914157	0.6557858	0.5875568	0.95054783
Organic anion transporter 3	1.0368013	1.3128741	1.2260255	1.1903119	0.8174194	1.0707477	0.94016545	0.8168197	0.8500225	0.8428488	0.8484807	1.0456159	1.0555484
Calgranulin B4	0.81455034	1.1537232	0.96542996	0.9188481	0.8691695	0.8095816	1.0213171	1.1853085	0.8566787	1.0733824	1.0860862	1.0488182	1.2388208
Phase-1 RCT-182	0.80381354	1.0504116	1.067901	1.0012845	0.9630818	0.61391276	1.3445776	0.8950122	1.281331	1.2125558	1.0824614	1.1211617	0.92480884
Calgranulin B8	0.807054	1.0032759	0.9922993	1.020967	1.0348674	0.9636791	1.7018445	1.1200568	1.4864833	1.1782433	1.3343514	1.1736747	1.2418784
Acylcarnitine dehydrogenase, mitochondrial	0.94879694	0.90755767	0.72787408	0.86253045	0.36755403	0.4223357	1.6718912	0.53837933	1.3748179	1.5467025	0.49715683	0.3516236	1.3389049
Phase-1 RCT-1728	0.58129114	0.7926087	0.98415077	0.7744426	0.6103814	0.828852	2.8452815	1.6105067	0.9637993	1.3748179	1.5467025	0.49715683	1.3389049
Phase-1 RCT-102	0.80343246	1.4603125	1.1514605	1.2184325	0.9643043	0.9491245	2.1074011	1.4152927	2.30129	1.820201	1.2431469	1.3953597	1.834223
Preproalbumin, sequence 2	0.6031414	1.134036	1.0476726	0.659906	0.44293204	0.8469666	0.4658184	1.6206956	1.8517461	1.3020786	0.823097	1.4656771	1.2786625
Apolipoprotein AII	0.7268845	1.134036	1.0476726	0.659906	0.44293204	0.8469666	0.4658184	1.6206956	1.8517461	1.3020786	0.823097	1.4656771	1.2786625
Phase-1 RCT-10	1.010865	1.5748872	1.8059895	1.4336033	0.6625086	1.0942042	1.0646038	0.7627225	0.7762741	1.5011882	0.8270066	1.6552892	1.413782
Phase-1 RCT-48	0.8952881	1.4457135	1.2248688	1.11473	1.0983503	0.83016187	2.0186927	1.4881655	2.1875398	1.09518	1.2304908	1.4811486	1.8259107

Phase-1 RCT-168	1.0921726	1.2053452	1.09685936	1.0754499	1.1028855	1.1008118	1.5757682	1.4902488	1.5104128	1.3677459	1.4286089	1.2159727
Phase-1 RCT-169	0.9862185	0.92394197	0.69837066	0.9766232	0.802311	0.8506036	1.7924161	1.362853	1.3013394	1.4841358	1.5591816	1.0508616
Phase-1 RCT-170	1.0703646	0.62277627	1.42026258	1.3389153	0.46432966	1.364337	2.4401787	1.9574517	2.879826	1.4510728	2.5463014	1.4152352
Phase-1 RCT-206	0.6310231	1.0353927	1.0394692	1.0207483	0.9363716	0.32943535	1.3541422	1.2882005	1.6139604	0.6086316	0.81710374	1.3287432
Phase-1 RCT-207	0.87455946	2.699396	1.616605	1.0263966	0.6678135	0.39428347	1.0248159	0.4751967	1.0399283	0.7375369	0.37453743	1.1060599
Phase-1 RCT-208	1.0076578	1.1619645	1.1672877	1.0881014	0.8345833	0.85057567	0.78636073	0.9178206	0.7504244	0.8155296	0.8456877	0.9363224
Phase-1 RCT-209	0.9322353	0.9973978	0.70198005	0.9076355	0.7699473	0.6891431	1.2607368	1.2035571	1.717585	0.7513359	0.7633074	0.7895658
Phase-1 RCT-210	1.3997965	0.94410735	1.1790247	1.0024462	0.7188248	0.6880351	1.5033158	0.94878956	0.9087696	0.9637694	0.8408374	0.8945387
Phase-1 RCT-271	1.1861613	1.0712596	1.5983188	1.4532664	0.85236764	0.48113066	0.871042	0.5718495	0.8669584	0.9675916	0.8408374	0.8945387
Phase-1 RCT-272	1.0044333	0.9457576	0.9224584	0.8526864	0.81142735	0.9105365	1.7236689	1.3627185	1.6077856	1.5402299	2.243397	1.2149446
Phase-1 RCT-273	0.7252309	1.1329285	0.8466555	1.0477209	0.7632008	0.85401547	1.150971	1.2735761	1.5040301	1.1773834	1.3075375	1.2794034
Phase-1 RCT-274	0.5270888	0.69331634	0.74524126	0.57624334	0.6924334	1.2469178	2.8324342	1.2672375	3.0221741	2.124673	1.765264	1.4171634
Phase-1 RCT-275	0.55655768	0.79704237	0.7362121	0.70143256	0.9174501	0.9899404	1.2083409	1.889949	1.5313503	1.0477068	1.457033	1.4673971
Phase-1 RCT-276	0.5145845	0.6751255	0.7179415	0.82310873	1.716926	0.8178926	2.449362	2.498233	0.8212106	1.0890082	1.1234883	1.5622343
Phase-1 RCT-277	0.8620833	1.3936377	0.83080756	1.168868	0.86354155	0.7728709	1.7223827	1.2159218	1.5160638	0.949911	0.7579392	1.4208465
Phase-1 RCT-278	0.8141939	0.9931758	0.9538498	0.9665953	0.6593506	0.7590086	2.2436502	1.4070039	1.520038	1.6892585	1.6087739	1.1449655
Phase-1 RCT-279	0.87806114	1.1227897	0.890972	1.0671042	0.6331319	0.7512626	2.186794	1.2634829	1.6172161	1.4018955	1.3082228	1.3317896
Phase-1 RCT-280	0.5503009	0.7018675	0.5888646	0.6222847	0.8852858	0.6974813	1.9787488	2.32032	3.150734	1.089721	1.922778	1.2154022
Phase-1 RCT-281	0.7380168	0.8016127	0.7073626	0.76105523	0.63873989	1.1117998	1.1511606	0.9213138	0.9223964	0.8697875	0.8481384	1.017036
Phase-1 RCT-282	0.7588865	0.92875767	1.4468027	0.90779823	0.9203667	0.88860653	1.3053929	1.211528	1.3318249	1.0810253	1.3744234	1.7151471
Phase-1 RCT-283	1.1519722	0.7961746	1.4668807	1.3502056	0.47758108	1.1952397	1.8071829	1.6583085	1.8017474	1.0388724	1.2675313	2.2770842
Phase-1 RCT-284	0.77941424	0.8725105	0.95271796	1.0682668	0.84555334	1.1713247	2.3404415	1.1240724	1.407337	1.6187182	2.1235428	2.3856025
Phase-1 RCT-285	1.0758861	1.984151	1.601275	1.045839	0.9881353	0.85987484	1.1084788	0.8674686	1.0899804	1.2789402	1.3931452	1.3017052
Phase-1 RCT-286	1.4528114	1.4174402	1.7893742	1.4053019	0.9186057	0.8844246	0.71409494	0.6780192	0.6780192	0.6780192	0.6780192	0.6780192
Phase-1 RCT-287	0.6566529	0.86272715	0.7403968	1.3007702	1.628704	2.3116677	1.628704	2.3116677	2.3116677	2.3116677	2.3116677	2.3116677
Phase-1 RCT-288	1.0677679	1.1530578	1.2453339	1.0753681	1.2606515	1.101815	0.62333494	0.72831508	0.70650727	0.6457143	0.7434449	0.53010094
Phase-1 RCT-289	0.5363411	0.7600223	0.8762356	0.76158834	1.0136195	0.8975925	1.6719808	0.92984946	2.186432	0.9470668	1.3102406	1.5326597
Phase-1 RCT-290	0.89630044	1.0214832	0.9994827	1.1513641	1.1655413	1.0023037	1.0023037	1.0023037	1.0023037	1.0023037	1.0023037	1.0023037
Phase-1 RCT-291	0.9976771	1.2471428	1.2551316	1.1588912	1.8150673	1.290509	1.1180175	0.78635556	1.0114678	1.1182048	1.1195285	0.69331545
Phase-1 RCT-292	1.0694853	1.0778945	1.0572224	1.172151	1.3473337	1.2468005	1.9742026	1.7422863	1.9135005	1.9883803	2.6762848	1.6509039
Phase-1 RCT-293	1.5797335	1.186149	1.4352084	1.3888939	0.97874614	1.0438954	1.1974717	0.878688	0.74794885	0.9427596	0.934615	0.83853805
Phase-1 RCT-294	0.94055974	0.8508976	0.8634478	0.75824475	1.2183743	0.8984557	0.7370881	0.71876038	0.5734302	0.9785142	0.6721038	0.77449816
Phase-1 RCT-295	1.3878073	1.1336772	0.9629484	0.8362814	2.7899957	2.3397868	0.7886401	0.8259432	0.74576594	0.8877055	0.7960341	0.750717
Phase-1 RCT-296	1.3473955	1.2668838	1.6881437	1.4668937	0.99746543	0.9553357	1.028134	0.49001384	0.8459045	0.9389193	0.81265134	0.93753004
Phase-1 RCT-297	0.9944749	0.95720905	0.93187445	1.0830653	1.303493	1.4104387	1.6058885	1.2048452	1.8012113	1.1115948	0.91026088	1.0248368
Phase-1 RCT-298	1.2269077	1.2323409	1.1318395	1.0743102	0.96791846	0.9607557	1.3263571	0.70734376	0.9757852	1.4601874	1.2633361	1.5435241
Phase-1 RCT-299	1.2007613	1.1402569	1.221857	1.1311085	0.9997844	1.2364088	0.98594344	0.93283355	0.97671406	0.98278475	1.1401714	0.9926258
Phase-1 RCT-300	1.1006147	0.8197416	0.88866845	0.6444524	1.4940335	1.4940335	1.4940335	1.4940335	1.4940335	1.4940335	1.4940335	1.4940335
Phase-1 RCT-301	1.2098488	1.066072	1.4211031	1.3571788	0.9851417	1.4917843	0.78992356	0.74695743	0.9547909	0.7699945	0.8641595	0.84432985
Phase-1 RCT-302	0.7479778	0.72154534	0.7899569	0.98187894	1.578077	1.0621145	1.6782147	1.0505928	2.543328	1.733376	1.5987842	1.4059458
Phase-1 RCT-303	0.6929011	1.0057452	1.0338424	1.0572431	0.9035317	1.1824845	1.2871934	1.0357251	1.7931908	1.2416072	1.3345616	0.96281114
Phase-1 RCT-304	0.92413974	0.82887086	1.0536855	1.0822908	1.2347424	0.9394559	0.74145013	1.0818814	0.73689184	1.165078	0.7260877	0.83248897
Phase-1 RCT-305	1.0307254	1.4807254	1.2811771	1.1888653	1.1980536	1.059257	1.3460537	1.2514149	1.5662527	0.7586625	1.3986899	1.2835791
Phase-1 RCT-306	0.8342359	0.8846934	1.0408093	0.8662071	1.064681	1.1228601	1.240772	1.6822037	1.4343596	1.9992133	2.1433775	2.855374
Phase-1 RCT-307	1.0652418	0.802194	0.9522636	1.0498322	1.071882	1.3263177	0.80213804	0.86632395	1.7981393	1.3898	2.142252	1.439242
Phase-1 RCT-308	0.79122436	1.027324	1.0239946	1.0765357	1.2614537	1.5171708	1.2018088	1.2504216	1.2818393	1.3898	2.142252	1.439242
Phase-1 RCT-309	0.9757629	0.8868035	1.067213	1.0447125	1.0262396	1.0742414	0.7461768	0.843076	0.92428444	0.8681315	0.6483728	0.74861467
Phase-1 RCT-310	0.8662555	1.1904318	1.093255	1.1228601	1.0742414	0.7461768	0.843076	0.92428444	0.8681315	0.6483728	0.74861467	1.46681467
Phase-1 RCT-311	1.1655883	0.85520675	1.076811	1.0319508	0.94237556	0.9085284	0.82827644	0.69784796	1.0573006	1.273324	1.0504124	0.85508674
Phase-1 RCT-312	1.4882226	1.603518	1.6283337	1.7581807	2.2437754	0.96300151	0.8630151	0.84411615	1.1732447	1.0608569	1.2163931	0.9263783
Phase-1 RCT-313	2.5246766	1.7744201	2.3055575	2.5618808	0.76450557	0.96600416	0.2709858	0.32538846	0.38656846	0.25971174	0.69382827	0.33055294
Phase-1 RCT-314	0.6470189	0.830372	0.814163	0.7281398	0.9112115	1.1332175	1.4515688	1.1923477	1.1923477	1.1923477	1.1923477	1.1923477
Phase-1 RCT-315	1.2585406	0.850846	1.0079315	0.89683604	0.830122	0.9348046	0.7343943	1.2055798	0.77133745	0.860286	0.82491785	0.69784805
Phase-1 RCT-316	0.7022035	0.83007765	0.79354674	1.3628268	0.9789285	1.4946824	0.8285434	1.5731704	1.1724768	1.537205	1.4407775	1.209529
Phase-1 RCT-317	0.8970142	0.9975469	0.8823545	0.79921514	1.3335591	0.9015953	0.6717326	0.6009479	0.9172152	0.6172856	0.74842376	1.2423155
Phase-1 RCT-318	0.8510504	1.0476319	0.9771488	0.8489645	0.8628534	0.7663128	1.361805	1.272717	1.12885	1.247602	1.1578837	1.5845529

Table 29

Phase-1 RCT-158	1.4243473	0.93760216	0.9774871	0.98972094	1.0187195	1.0589758	0.9222641	0.7080927	0.59852974	0.7695739	0.8204086	0.8161616	1.0475478
Phase-1 RCT-113	1.1157209	0.96395636	0.99741054	0.95461124	1.3278039	1.5772876	0.73131517	0.7575864	0.7537412	1.2226956	1.1846575	1.3205221	1.0977056
Endogenous retroviral sequence, 5' and 3'	0.7726388	0.84284475	0.9285884	0.7087065	0.7301481	0.8492282	1.0405344	1.1391475	0.9159402	1.0911741	0.6897357	0.5028535	0.7683273
LTR													
Beta-actin	0.88845854	1.1876881	0.9515724	0.9313752	1.0390488	1.1663126	0.7174187	0.48466464	0.59851686	0.64901036	0.9104236	0.49933836	0.67264247
Phase-1 RCT-65	1.5055437	1.0402448	1.70887	1.100142	0.93437634	0.8512572	0.7017984	0.4808603	0.7274052	0.8288731	0.89462864	0.79592913	1.0188665
MHC class I antigen RT1.A1(0) alpha-chain	1.5445515	0.97621883	1.3420428	1.4158693	0.9633986	0.7088644	0.34139818	0.41604963	0.4768143	0.47365347	0.6070323	0.4794017	0.4877789
Bax (alpha)	1.794076	1.3011365	1.5375423	1.6359781	1.2837338	1.4070051	0.70301443	0.8891272	0.7566884	0.8421159	0.864095	0.7174688	0.89328593
Carboxyl reductase	1.2161262	0.8222543	1.178946	1.2875112	1.0848179	1.188021	0.6992121	0.955411	0.68254983	0.78204834	0.7316877	0.4947433	0.7166372
Beta-actin, sequence 2	0.71572874	1.2500538	1.148616	1.075798	1.2712597	0.9385561	1.811637	0.8598465	1.5870436	1.3321087	1.674668	1.106917	1.2246327
Interferon-10	1.5236165	0.8128061	0.9839303	1.0638858	1.0878235	1.0854806	1.0686503	0.72397643	0.81282985	0.704079	0.7348007	0.57088758	0.6385567
Phase-1 RCT-191	1.8358603	1.1005602	1.1807156	0.8712906	0.81237626	0.739506	0.4825102	0.42072088	0.50937134	0.6588714	0.77698237	0.6228851	1.0681762
Apoptosis-regulating basic protein	0.73978823	1.217682	0.95331327	0.8891878	1.0413375	0.90570214	0.9141568	1.8581547	0.77817684	0.9635043	1.0323245	1.1737734	1.0590396
Glutathione peroxidase	0.7701368	1.218955	1.6729554	1.5435367	1.1140821	0.90370214	2.1105447	1.2836469	2.499732	1.3857008	1.425291	1.7855625	1.0977757
Phase-1 RCT-67	1.9536538	1.1352313	1.2032106	1.1789272	0.8090834	0.8261859	0.9740607	0.8162573	1.5926111	1.3034889	1.6641882	1.5434601	0.768427
Tryptophan hydroxylase	0.8785093	1.0174567	0.90891457	0.99230486	0.91198325	1.1378278	1.3758339	0.92877923	1.0766674	0.7608886	1.0648645	0.82196957	0.8871957
Sulfotransferase K2	0.9395114	1.1224775	1.0801557	1.0324702	0.83339816	0.85578308	0.8633307	0.92877923	1.0766674	0.7608886	1.0648645	0.82196957	0.8871957
Calgranulin B9	1.0541232	0.9446783	0.7833203	0.8395278	0.8192334	0.85578308	0.8633307	0.92877923	1.0766674	0.7608886	1.0648645	0.82196957	0.8871957
Phase-1 RCT-123	1.2285187	1.0864555	0.89239564	1.025285	0.9031745	0.7638144	0.8518517	1.0585556	0.7388913	0.9148727	1.0545751	1.0028851	1.275413
Phase-1 RCT-46	1.2663022	1.075475	1.1654053	1.2109556	0.8192334	0.85578308	0.8633307	0.92877923	1.0766674	0.7608886	1.0648645	0.82196957	0.8871957
Aquaporin-3 (AQP3)	1.3493724	1.0510804	1.0829227	1.130839	0.92511433	0.867235	0.9712327	1.2301881	0.84711355	0.921529	1.0695045	1.0060319	1.0891659
Stearyl-CoA desaturase, liver	2.494389	0.8967118	0.7383166	1.018992	0.13489028	0.37373495	0.39196312	0.28683527	0.17854355	0.128946	0.35426414	0.23471553	1.5176382
Phase-1 RCT-64	1.3346026	1.1231117	1.2208481	1.1298412	0.7512596	0.9118815	0.55015826	0.66300565	0.6834321	0.56207657	0.6374831	0.706395	0.98177385
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-no, necrosis													
observed; yes-both, necrosis with inflammation													
observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 28)													

Table 29

Table 28. Expression Data for 24 Hour													
Timepoint (1)	EST 0.4	EST 0.4	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500	ETH 2500
Compound-Dose (2)	1435	1435	1435	1435	1435	1435	1435	1435	1435	1435	1435	1435	1435
Animal Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)													
Gene Name (5)	1.2651716	1.0269312	0.9200161	0.9307378	0.9070299	1.0266209	0.7731414	0.8582206	0.9292473	0.9292473	0.9292473	0.9292473	0.9292473
Gamma-actin, cytoplasmic	0.71977036	0.5864749	0.10178725	1.1509597	1.0647606	1.0139755	1.0128912	0.9853478	0.8900859	0.8900859	0.8900859	0.8900859	0.8900859
Phase-1 RCT-145	0.6969673	0.8774948	1.8427808	1.4590882	1.2693968	0.92641175	1.1269455	0.9038785	1.2027047	1.2027047	1.2027047	1.2027047	1.2027047
Gadd45	1.0395666	1.0391445	0.8743435	0.95708394	0.94012356	0.9609874	1.0188674	0.8192461	0.93402636	0.93402636	0.93402636	0.93402636	0.93402636
Phase-1 RCT-78	0.6964714	0.80396975	1.0454319	1.117826	1.1851271	0.90253637	1.1279119	0.9393658	1.0111462	1.0111462	1.0111462	1.0111462	1.0111462
Fas antigen	0.47673736	0.6007773	1.0413358	1.6568985	1.2833334	1.065572	0.99999994	1.0407782	1.0615511	1.0615511	1.0615511	1.0615511	1.0615511
Macrophage inflammatory protein-2 alpha	0.74695916	0.76840345	1.2803677	1.3998353	1.2393825	0.9876685	1.0294182	0.9136044	0.9230917	0.9230917	0.9230917	0.9230917	0.9230917
Interleukin beta1	0.9476345	0.8913919	1.1052521	1.2135482	1.0903304	0.9374215	1.0494872	1.0257536	0.95471873	0.95471873	0.95471873	0.95471873	0.95471873
Aspartate aminotransferase, mitochondrial	1.1385665	1.1017342	1.2012503	1.1233150	1.1574354	1.1519563	1.0510874	0.88195164	0.9462249	0.9462249	0.9462249	0.9462249	0.9462249
Caslin-alpha	0.93280375	0.99071671	1.1233150	1.1233150	1.1574354	1.1519563	1.0510874	0.88195164	0.9462249	0.9462249	0.9462249	0.9462249	0.9462249
Malic enzyme	0.6161837	0.38559222	1.062861	0.9151848	0.963444	1.099536	0.9242795	0.88195164	0.9462249	0.9462249	0.9462249	0.9462249	0.9462249
Phase-1 RCT-30	0.62703964	0.77927835	1.4274297	1.4958138	1.3487866	1.0327896	1.0327896	1.0003347	1.1512043	1.1512043	1.1512043	1.1512043	1.1512043
Hepatocyte growth factor receptor	1.0872375	1.0074514	1.2043198	1.2669639	1.3002908	0.92210356	1.1671767	1.1671767	1.20238	1.20238	1.20238	1.20238	1.20238
MAP kinase kinase	1.591073	1.4771343	0.9520389	0.92724584	0.9882651	1.0480261	1.171767	1.1671767	1.20238	1.20238	1.20238	1.20238	1.20238
Sodium/glucose cotransporter 1	0.8215316	1.6167016	0.90573834	0.7650525	0.71845245	1.3082288	0.6330937	0.77874565	1.4208946	1.4208946	1.4208946	1.4208946	1.4208946
Phase-1 RCT-27	0.5725276	0.7050141	1.0673821	1.1265931	1.0680888	1.0167008	0.98068378	0.89195516	0.9891457	0.9891457	0.9891457	0.9891457	0.9891457
Phase-1 RCT-192	1.3781735	1.5242581	1.0709258	1.0240375	1.0184354	1.1065124	0.9881312	1.0062851	1.3071494	1.3071494	1.3071494	1.3071494	1.3071494
Phase-1 RCT-268	1.3261905	1.5674889	0.78341186	0.8188883	0.79542168	0.92475617	1.219592	1.1668884	1.4516513	1.4516513	1.4516513	1.4516513	1.4516513
Phase-1 RCT-37	0.9023704	0.99816376	0.9250751	0.9046563	0.8964241	1.2269347	1.1488819	1.1280755	1.185578	1.185578	1.185578	1.185578	1.185578
Organic carbon transporter 3	0.6103713	0.5946059	1.0120239	1.003652	1.037116	1.0330167	0.8688968	1.1240776	1.3888477	1.3888477	1.3888477	1.3888477	1.3888477
60S ribosomal protein L6	0.9445764	1.112401	1.117767	1.019834	1.0304277	1.4700765	1.4022588	1.4838413	0.8420267	0.8420267	0.8420267	0.8420267	0.8420267
Finger protein	0.5098187	0.5419377	0.96353844	0.87446623	0.927852	0.9844617	1.0190402	0.88740757	0.8958984	0.8958984	0.8958984	0.8958984	0.8958984
Calgranulin B2	1.070592	0.9519377	0.88747615	1.6370097	1.2706339	0.84445417	0.923841	0.9738474	0.9912866	0.9912866	0.9912866	0.9912866	0.9912866
IP-1	1.5818233	1.3493189	0.7053197	0.7300615	0.58827865	1.1623333	0.9738474	0.9912866	0.9912866	0.9912866	0.9912866	0.9912866	0.9912866
Phase-1 RCT-115	0.64748014	0.71450054	1.0325666	1.2133467	1.2922642	0.9334973	0.9518489	0.9673781	1.0547374	1.0547374	1.0547374	1.0547374	1.0547374
Marlin FG	0.95486534	0.8332527	0.88356659	0.73951649	0.8347963	1.0169727	1.0471681	1.0407778	0.90768665	0.90768665	0.90768665	0.90768665	0.90768665
Phase-1 RCT-24	0.7653642	0.673068	1.1515945	1.1372868	0.9802804	0.81442016	0.97627884	0.84907794	0.9856949	0.9856949	0.9856949	0.9856949	0.9856949
MutL homologue (MLH1)	0.884628	1.0078204	1.0083717	1.0484287	1.0207289	1.2449049	1.1440505	1.1214274	0.1025977	0.1025977	0.1025977	0.1025977	0.1025977
Phase-1 RCT-79	0.6107471	0.59950588	0.9387482	0.7228533	0.9094718	0.8216071	0.8192871	0.8098254	0.84036726	0.84036726	0.84036726	0.84036726	0.84036726
Sorbitol dehydrogenase	0.9018442	0.8116842	1.1094727	1.2242498	1.1888718	1.0389458	1.0397791	1.4024352	1.2551088	1.2551088	1.2551088	1.2551088	1.2551088
Phase-1 RCT-24	1.1850663	1.201312	0.98073815	0.8905147	0.90352845	1.065813	1.030179	1.4024352	0.8164291	0.8164291	0.8164291	0.8164291	0.8164291
Calgranulin B1	1.3828574	1.561409	0.85836134	0.6871398	0.90451837	1.065813	1.030179	1.4024352	0.8164291	0.8164291	0.8164291	0.8164291	0.8164291
Elongation factor-1 alpha	1.7075594	1.367901	0.5514012	0.48610476	0.531152	1.769523	1.2223489	1.2800771	0.8024624	0.8024624	0.8024624	0.8024624	0.8024624
L-glutamate-gamma-lactone oxidase	1.2500211	1.2096606	0.3818125	0.176846	0.15152702	0.3537291	0.0039223	0.85478375	0.87657845	0.87657845	0.87657845	0.87657845	0.87657845
C-Jun	0.54506855	0.5968693	1.16846	1.1572702	1.1572702	0.3537291	0.0039223	0.85478375	0.87657845	0.87657845	0.87657845	0.87657845	0.87657845
Phase-1 RCT-233	1.2612715	1.195481	0.81876533	0.8250134	0.87684367	1.1763881	1.0080779	1.0387844	0.9798933	0.9798933	0.9798933	0.9798933	0.9798933
Phase-1 RCT-38	0.8156356	0.8033255	0.90672717	0.84055295	0.91783553	1.1024232	0.8833934	0.8815296	0.962288	0.962288	0.962288	0.962288	0.962288
Phase-1 RCT-242	0.7083569	0.70639493	1.176859	1.3089999	1.1310357	0.9102277	0.95364593	0.8815296	0.8274908	0.8274908	0.8274908	0.8274908	0.8274908
Phase-1 RCT-181	1.3084567	1.310388	0.5688813	0.90781875	0.82744837	1.2502951	1.041412	1.0044295	1.1977609	1.1977609	1.1977609	1.1977609	1.1977609
Phase-1 RCT-185	1.1392018	1.1783408	0.7772944	0.7243637	0.5548018	1.0505164	1.2501184	1.0576522	0.83340254	0.83340254	0.83340254	0.83340254	0.83340254
Phase-1 RCT-179	1.0424376	1.1528998	0.8307287	0.8527131	0.8471132	0.974558	1.1154854	1.0404769	0.9736077	0.9736077	0.9736077	0.9736077	0.9736077
Phase-1 RCT-144	0.97802384	1.0122673	1.081442	1.1252721	1.1682708	0.8925341	0.91010506	0.88609564	0.8938355	0.8938355	0.8938355	0.8938355	0.8938355
IL-6	1.5759537	1.237178	1.0275424	0.82123053	0.8844844	0.89156497	0.88638756	0.87779854	0.8625718	0.8625718	0.8625718	0.8625718	0.8625718
Phase-1 RCT-225	1.1455531	0.9038883	0.80976635	0.16183868	0.8345152	0.80509144	0.899917	0.8663164	0.9047852	0.9047852	0.9047852	0.9047852	0.9047852
60S ribosomal protein L8 (alternata clone 1)	0.9289376	1.1132572	0.79489744	0.67947423	0.7867172	1.3107276	1.1808417	1.3384054	1.2922487	1.2922487	1.2922487	1.2922487	1.2922487
Beta-tubulin, class I	0.7650879	0.61294305	0.92909659	0.928104	0.9484149	1.2590309	0.71398443	0.940439	0.9834076	0.9834076	0.9834076	0.9834076	0.9834076
Multidrug resistant protein-2	0.8605036	1.0269518	1.0269518	1.3461186	1.595474	1.5065088	0.91273177	0.97833114	1.1141677	1.1141677	1.1141677	1.1141677	1.1141677

Table 29

Phase-1 RCT-49	0.78126558	1.0211347	1.0137843	1.0463966	1.1178201	1.0020263	0.9867035	1.0544252	0.9888853	1.0253555	0.8965045	1.0603088	0.99146307
Calgranulin B3	0.87466824	0.9213482	1.0766559	1.2222823	1.1577325	0.9597511	0.9526245	0.9471139	0.9526244	0.94877648	1.0423627	0.92884787	0.84071217
NADP-dependent isocitrate dehydrogenase, cytosolic	1.31425588	1.5176132	0.9358633	0.8627617	0.7035437	1.2423005	1.1554746	1.0711395	1.2732242	1.2625485	1.2747566	1.081	1.11424
Oxysterol binding protein 1	0.73917925	0.7027759	1.1804876	1.0594472	1.0813948	0.9428755	0.99690244	0.98956585	0.99214568	0.91179276	0.9731556	0.7633047	0.861349
Sodium/bile acid cotransporter	1.388821	1.2975508	0.5372668	0.5272897	1.0388522	0.5272897	0.9110429	0.9846383	0.9077077	0.7180137	1.0354079	0.7085403	0.9230885
Phase-1 RCT-174	1.3128368	1.0149492	0.7774332	0.8813551	0.7361806	1.0610938	0.94057824	0.9553428	0.8653428	0.8653428	0.9545633	0.924603	0.82778154
Phase-1 RCT-177	1.2381338	1.0581189	0.84572617	0.843298	1.210108	0.82741004	0.8934878	0.9023556	0.87990177	1.294417	0.8737349	0.76885854	0.76885854
Inositol polyphosphate multikinase (pmk4)	1.706559	2.1670918	0.5582202	0.5228375	0.4952882	1.4455702	1.2819808	0.8386012	0.9392834	1.7545887	1.1848342	1.2938552	1.2938552
Phase-1 RCT-256	1.674851	1.1853721	0.9666137	0.75371087	0.93684256	1.2787114	0.8220197	0.984407	0.9187123	1.0223114	1.0767784	0.7495958	0.7495958
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	1.1273277	1.1289779	0.8938476	0.9218638	0.83318868	0.73128164	1.085001	0.9602932	0.72250426	0.74682925	1.0578885	1.0775343	1.1715676
CDK102	1.1872875	1.3560663	1.0155708	0.9587846	0.8793598	1.2498389	1.0564898	1.1475538	1.2003838	1.085087	1.1428353	0.9537846	1.0277531
Phase-1 RCT-209	1.056315	1.0717789	0.95093394	0.9283357	0.8589886	1.0855996	1.0786821	1.053371	1.1501275	1.028174	0.9568814	1.1174183	1.1638595
NADH-cytochrome b5 reductase	1.2054217	1.3161631	0.95716835	0.8717288	1.312785	1.0317776	0.8531401	1.0299705	1.0299705	1.0698885	1.006114	0.94018285	0.9830271
Dynamin-1 (D100)	1.2956442	1.2930012	1.052875	0.9121175	0.8014669	0.9141439	0.9881578	1.0574175	1.0129246	0.9600783	0.92894765	0.925337	1.040784
Senescence marker protein-30	1.8732315	2.0919435	0.6742879	0.7360416	0.765304	0.9124727	0.78828025	1.2741297	1.0138576	1.2730807	1.6797433	1.3462727	1.1890281
Phase-1 RCT-189	1.3531849	1.2975395	0.8905558	0.84489006	0.86187606	1.0319623	0.93345213	0.8320576	1.0744749	0.93753374	1.2107489	1.093622	1.1102851
Carnitine palmitoyl-CoA transferase	0.493325	0.49659735	1.3445903	1.6297674	1.433383	0.8893293	0.9702359	0.852633	0.832225	0.95177815	1.0472246	0.94373405	0.9918485
Alpha-2-microglobulin	1.7701721	1.6105427	0.7403948	0.48049827	0.485786	1.0024838	1.0082632	1.132832	0.9541856	0.87374784	1.0402861	0.78032035	0.8092943
Adiponectin C11	1.1653746	1.4715965	1.057229	1.069896	0.8830666	1.0248436	1.3854116	1.5707234	1.4927233	1.3991228	1.4298743	1.1572817	1.2843687
Cathepsin L sequences 2	1.056833	1.4139824	0.8378182	0.88958845	1.408584	1.286843	1.4703878	1.2765693	0.9227444	0.81631565	1.2427282	0.970845	1.0218576
Phase-1 RCT-141	1.0931046	1.0765735	1.3322206	1.6164218	2.0392177	1.0584439	0.8588048	0.907087	1.3285871	0.9870702	0.9379546	1.217109	1.275355
Phase-1 RCT-289	1.2208928	1.4253144	0.9438045	0.7315218	0.7204099	0.9664605	0.95592386	0.9058686	1.0400143	1.0274582	0.9114033	1.0610157	0.8207943
Endothelin-1	0.6576577	0.5759505	1.4137945	1.8742471	1.2481735	1.121895	0.9548643	1.05592386	1.0374202	1.0688435	0.9742302	0.9738809	0.8649706
Phase-1 RCT-282	0.7183336	0.83907205	1.0832293	1.1418105	1.135994	0.9950322	1.0248271	1.0526645	0.97289315	0.87289315	0.90380559	1.2901764	0.82495064
Phase-1 RCT-140	1.2633359	1.3036438	1.054655	1.1418105	1.135994	0.9950322	1.0248271	1.0526645	0.97289315	0.87289315	0.90380559	1.2901764	0.82495064
Cyclin D1	1.5300508	1.1239287	1.290452	1.366025	1.1288846	1.1338098	0.90520656	0.90931773	0.9915149	0.87289315	0.90380559	1.2901764	0.82495064
Phase-1 RCT-287	1.298506	1.2078395	0.94755924	0.9243863	0.94351584	1.0779002	1.3037821	0.908079	0.7741434	0.78511085	1.0414336	0.95441084	0.82381004
Phase-1 RCT-281	0.95353216	1.0189147	0.8766473	0.8943317	1.0575363	0.870467	0.8281912	0.7741434	0.78511085	1.0414336	0.95441084	0.82381004	0.82381004
Retinol-binding protein (RBP)	1.8771479	2.0178832	0.81706554	0.8559224	0.8928971	1.3389442	1.3350712	1.5971354	1.2655182	1.2638384	1.4503713	0.8565593	0.9554011
ATP-stimulated glucocorticoid-receptor translocation promoter (Gyk)	1.3703811	1.1299026	0.9534824	0.890482	1.0061141	0.7781165	0.858943	1.2103577	0.955687	1.0404857	1.3739076	1.1612861	1.3007833
Phase-1 RCT-60	1.3744432	1.4094509	1.0971301	1.1562821	1.1889036	1.0820953	1.0470113	1.0697104	0.9523712	0.98903405	0.949891	0.9870905	0.82173485
Pyruvate kinase, muscle	0.77053984	0.8179476	0.8675874	0.881047	1.1860474	0.9591166	0.891818	0.8846587	0.8522423	0.8364939	0.92171616	0.8897884	0.8429115
PAR interacting protein	0.8488239	1.04751	0.0705303	1.0638709	1.4809511	0.93543077	0.9772186	0.94378103	0.8984325	0.8976926	0.92770153	0.9102875	0.8155884
Nucleoside diphosphate kinase beta isoform	1.4120921	1.1464012	1.0328797	1.2023184	0.8978283	1.1134032	1.0282487	1.0950992	1.5023903	1.2590969	1.1018003	0.8557461	0.7585534
Gadd153	0.839857	0.8773079	1.34298	1.5339345	1.2632084	0.74601597	0.8571322	0.8003311	0.8473864	0.84065844	0.8469438	1.0192113	1.1481335
Insulin-like growth factor binding protein 1	1.0389254	0.9889363	1.200668	1.1971196	1.145748	0.91915865	0.78057	0.9186817	0.82378045	1.0165784	0.95942544	1.0823399	1.1700188
c-H-ras	0.79964024	0.81043625	1.1218467	1.344779	1.26374	0.7878978	1.3341768	1.1276052	1.260784	1.189749	1.3012285	1.0282845	1.0178785
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1.350799	1.2607394	0.8895048	0.85327613	0.7689211	0.7555214	1.3843874	1.2058019	0.7605974	0.7477419	1.3029667	1.1629593	1.323366
Phase-1 RCT-52	1.2440588	1.2773	0.97670954	0.8752521	0.844945	1.232956	1.0072919	0.86254424	0.847856	1.2682145	1.0209745	0.9572556	0.81058087
Alpha 1 - inhibitor III	1.4962704	1.1434889	0.8339713	0.513244	0.43941742	0.950283	1.034861	1.1419841	0.80854726	0.84084535	1.0951537	0.6020309	0.83453345
Sterol carrier protein 2	0.86603388	1.1917185	0.8240564	0.8257532	0.6942389	0.983834	1.124474	0.9073666	1.33027	1.155923	1.4688947	0.81073195	0.825104
Organic anion transporter 3	0.7497862	0.78840345	1.0547528	1.5776743	1.0287512	1.180246	0.94928193	0.9730621	0.94889267	0.9470705	1.0033443	1.1841656	1.208371
Calgranulin B4	1.057008	0.98037894	0.8659887	0.673047	0.6535299	1.1372943	1.0185418	0.852805	0.83304944	1.0174085	1.0651077	1.003662	0.89294684
Phase-1 RCT-182	1.498539	1.2597803	0.86500937	0.8308475	0.92152095	1.0144888	1.1268818	1.1011392	1.1339732	0.9596329	0.94750834	0.86057645	0.8578595
Calgranulin B8	1.045202	0.784736	0.86857564	0.8133249	0.8694555	1.3843132	1.1406862	1.1370094	1.6357695	1.3696157	1.0478403	0.6621312	0.8554995
Adenine dehydrogenase, microsomal	1.3841368	1.2749555	0.957112	1.030808	0.979402	1.008818	1.040859	1.1359392	1.1282974	1.1857485	1.1792107	0.7770435	0.766881
Phase-1 RCT-128	1.4110892	1.3695928	0.9785938	1.0117476	0.87871386	1.1931058	1.2814538	1.3689001	1.38258	1.0752748	1.267445	0.9570573	1.007732
Phase-1 RCT-102	1.0533947	1.0439922	1.0213845	1.003478	0.7765676	0.96896583	0.5255153	0.9590277	0.77800083	0.7410388	1.0218959	1.1041686	0.63042563
Protein tyrosine kinase, sequence 2	1.5322143	1.6020738	0.9238532	0.5910414	0.6744676	1.3216339	1.2474103	1.2767691	0.97848083	0.97848083	1.3085474	0.9841279	1.204235
Apolipoprotein AII	0.94656354	0.8091887	0.8766759	0.713841	0.38341254	1.3408428	0.86225255	1.2471455	1.0101284	1.114882	2.2184378	1.156611	1.2206213
Phase-1 RCT-10	1.1802470	1.6389038	0.8836972	0.9725278	0.83368134	1.1565168	1.2284808	1.2812656	1.2405734	1.1159843	1.5403995	1.1953961	1.172179
Phase-1 RCT-18	1.0438698	0.9652895	0.811603	0.9107115	0.9289785	0.92715885	0.9804442	1.1088219	0.8067153	0.8596532	1.2042587	1.1745371	0.96225363
Phase-1 RCT-8	1.5585588	1.800781	0.9384189	0.5895564	0.69038744	1.163162	1.135126	1.3489852	0.8357375	1.1144258	1.5918583	0.88234904	1.2218854

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Phase-1 RCT-168	1.4189221	1.3283438	0.8053057	0.9067386	1.1216338	1.1330884	1.0570587	1.0595481	0.9835044	0.9285603	0.8216755	0.89795345
Phase-1 RCT-88	1.5352123	1.3457224	0.85235023	0.89233616	0.73248273	1.0434328	0.9984894	1.18451	1.0842041	1.0428312	1.0712706	1.1189829
Beta-alanine synthase	1.5802604	1.5750213	0.9167801	1.0559396	0.8271738	1.3462027	1.2323231	1.408729	1.4117267	1.6381153	1.5656568	1.565179
Phase-1 RCT-286	1.1360638	1.2712151	1.6672184	1.0480498	0.72649443	1.863238	0.9543105	1.0440684	1.4472808	0.70198873	1.3327147	1.3242425
Carbonic anhydrase III	2.2234397	1.1782551	0.71728324	0.41774556	0.24289669	0.388894	1.068523	1.3210389	0.46283108	1.8423433	1.3327147	1.3242425
Phase-1 RCT-291	1.0565667	1.199298	0.88509405	0.8402184	0.5500333	1.010833	1.0488112	1.0232352	1.0851074	1.0845692	1.0854456	0.7372149
Carbonic anhydrase III, sequence 2	1.6506076	1.3405802	0.62857663	0.7150904	0.56042488	1.5017109	1.1568124	1.4596941	1.1920822	1.0682557	1.7484083	0.8769084
Phase-1 RCT-271	0.92840525	0.61860335	0.9098022	0.7964552	0.7079361	1.3688963	0.9620906	1.0118998	0.9160094	0.82699877	0.89537024	0.6070189
HMG-CoA synthase, mitochondrial	1.2181141	1.117048	0.83051337	0.84754534	0.82984485	1.0899884	0.93202946	1.1887152	0.8437172	0.845733	1.1828595	0.7005712
Phase-1 RCT-189	1.3470984	1.4618288	0.97841184	0.78031826	1.0318937	1.2699235	1.398372	1.1041151	0.99039253	0.8520449	1.3046457	0.9279708
Phase-1 RCT-40	1.2238301	1.1034546	0.88714258	0.7425576	0.79136455	0.8231138	1.1422206	1.3273428	1.0679424	1.1622511	1.6212785	1.1318879
Uridine diphosphate 2 precursor	1.5330365	1.5114492	0.8120008	0.74076655	0.6949401	0.8332637	1.254381	1.0858027	1.0897653	0.859296	1.188757	1.2636068
Paraoxonase 1	1.450182	1.7102482	0.786574	0.8305974	0.65256596	1.0119269	1.0515544	1.0120177	0.9885652	0.8427155	1.2265178	1.0188944
Liver fatty acid binding protein	1.5085846	1.7083444	0.9107334	0.89337445	0.635787	1.17854	0.81214744	1.0035268	1.1018152	1.2908162	1.350813	1.6880088
Prethelin-1	1.9529058	1.1621615	0.8143212	0.55630314	0.43437248	1.1635303	1.1584702	1.2575405	0.87192947	0.97127765	1.1415625	0.6207088
Phase-1 RCT-38	1.3405435	1.235193	0.75803494	0.598616	0.7186273	1.233028	0.8730233	0.845874	0.9906432	1.1865863	1.0762242	0.7602426
Transferrin	1.3264352	1.6158692	0.67402405	0.4459006	0.4162147	0.697636	1.3688873	1.4785382	1.2528908	1.2349112	1.232624	0.934888
Hepatic lipase	1.2149847	1.2364718	0.78572666	0.7671849	0.57372	1.1703391	0.5905068	0.66897176	0.66383328	0.8488783	1.537084	1.0639855
Cytochrome P450 11A1	0.77618004	0.7022573	0.9716611	0.9833385	0.8979585	1.0157073	0.93668383	0.98337704	1.0011829	0.8886395	0.89405058	0.60395707
Phase-1 RCT-175	1.0978908	1.2400107	0.89380985	0.81697855	0.77039785	1.1808162	1.1782234	1.3182769	1.4989492	1.168386	1.4097598	1.1240064
Phase-1 RCT-117	1.1984391	1.2757537	0.96098815	1.0947771	0.86036355	1.0330738	1.0846258	1.1961775	0.8742018	0.91353994	1.4294094	1.076877
Melanoma-associated antigen ME491	1.0498053	1.105317	0.7079762	1.2323722	1.1641988	0.89261	1.140764	1.2352814	0.87242013	0.83893906	0.8570356	1.0776876
Phase-1 RCT-12	0.7784683	0.71183056	0.9230886	0.8333209	0.10716265	0.905771	0.8567398	0.9113789	0.8819015	0.8992224	0.92847085	0.9134523
Phase-1 RCT-152	1.32434	1.3338519	0.9339284	0.93704885	0.93861304	0.988084	1.0349246	1.0153865	1.2409565	1.0683783	1.0407035	0.93016027
14-3-3 zeta	0.60365366	0.60830228	1.238708	1.495327	1.1589088	0.876403	0.8817888	0.986716	0.9546698	0.97621085	1.2081018	1.2623328
Cytochrome P450 2C23	0.9770977	1.951898	0.9154288	0.7683751	0.70093878	1.0345389	1.028015	0.90023947	1.2461257	0.9479227	1.5247355	1.1291871
Voltage-dependent anion channel 2 (Vdac2)	1.120851	1.188442	0.9666815	0.9391525	0.86066973	1.3871534	1.1189808	1.1931305	1.1257253	1.1406406	1.2459085	1.0586313
Phase-1 RCT-154	0.7409971	0.5378006	1.1342084	1.2516856	1.070859	1.1688327	1.1167088	0.87683755	1.1130904	1.0912505	0.9374479	1.0592324
Superoxide dismutase Mn	1.4282388	1.3460727	1.3083849	1.580414	1.3307705	0.94031525	0.9087671	0.998877	0.9910877	1.0324523	1.0768795	1.2556886
c-myc	0.53154314	0.5553087	1.3084487	1.674187	1.4409946	0.8635587	0.86039184	0.9582961	1.0782863	1.0097581	1.0161318	0.93614826
Phase-1 RCT-186	1.2116219	1.1877297	0.7688414	0.6290527	0.6130652	0.77283823	1.3393956	1.0831472	0.96276546	0.80424585	1.108084	1.032137
Caldagranin B5	0.7022382	0.6880716	1.3745749	1.6233068	1.283743	0.8119277	0.89474055	0.8805602	0.97021997	0.9849828	0.80670693	1.133725
Phase-1 RCT-205	0.77510138	0.87861437	1.1835957	1.2783668	1.207424	0.950098	0.899407	1.0158995	1.0180873	0.9918952	0.9175477	1.018404
Phase-1 RCT-68	1.0361072	0.7774125	1.2521528	1.2612504	0.9461666	1.0316281	1.0532663	1.0335963	1.0139332	0.89474595	0.9120405	0.9710993
Phase-1 RCT-3	0.8018494	0.58595365	1.0201565	0.8898638	0.9390233	0.9555513	1.0038714	1.0417287	1.0134537	0.96987313	1.2212994	1.2813135
Alpha-tubulin	1.1588819	0.85916215	1.174103	1.708527	1.358767	0.7789866	0.99056304	0.9395318	0.9716406	1.0205729	1.0217234	1.0500149
Ribosomal protein L13A	1.5514863	1.3729982	0.974562	1.1429586	1.105641	0.9823912	0.69045	0.8010097	0.78625824	0.803584	0.9867037	0.8403047
IgE binding protein	0.82092806	0.8120038	0.9000774	0.83905524	0.89779808	1.0465435	1.1453816	1.1530308	1.1703004	0.957026	0.9618945	0.97522205
Phase-1 RCT-39	0.9532045	0.96190614	0.97156164	1.2165273	1.182568	0.8688794	0.85888235	1.0253248	0.957026	0.9618945	0.97522205	1.084732
Cofilin	1.1509507	1.1028041	0.9378684	0.8456676	0.7412532	1.032263	1.0245838	1.1768026	1.0187388	1.0786642	1.1897886	1.0124148
Heme oxygenase	0.7707242	0.9808832	1.0483818	0.8591566	0.934662	1.0543134	1.4808718	1.0965084	1.1825075	1.1775445	0.9275699	1.0702342
Phase-1 RCT-241	1.6258468	1.2485844	1.3009809	1.2081486	0.8616385	0.89752173	0.9469523	0.8582842	1.1073796	1.137837	1.5202748	1.0539388
Ribosomal protein S9	0.7130126	0.74372333	1.0846821	1.2426503	1.1467519	1.0524114	1.0886125	1.077604	1.053211	1.016282	1.0063024	0.88337544
Anticardiolipinase	0.8788026	1.5461082	0.7590273	0.5735568	0.53145474	1.384146	1.3484147	1.2387845	1.7201061	1.1644548	1.1223149	1.1616768
Phase-1 RCT-180	0.78551665	0.7782769	0.9105614	0.9332835	0.95090646	1.4803859	1.0721633	0.95887315	1.128116	1.0210711	0.9544365	0.7656765
Unlabeled resistant protein-1	0.645867	1.0715888	1.2814727	1.4659857	1.3232402	1.0387156	1.0215632	0.9812842	1.0127537	1.0274177	0.9831186	1.1458487
Unlabeled decarboxylase	0.7772626	0.8756911	1.1004072	1.1450986	0.7088374	1.1895338	1.2558338	1.0560604	0.9498547	1.0682747	0.88904485	0.94539136
Thymosin beta-10	1.497367	1.2076551	0.8441134	0.8789107	1.0272658	1.027828	0.9214841	1.0081626	1.0814888	1.025475	1.5219233	0.9581588
Phase-1 RCT-72	0.7989049	0.94950324	1.0411463	1.1040658	1.0457451	1.0213201	1.0129823	0.847184	1.0046018	1.046018	1.0128772	0.9983308
Phase-1 RCT-109	1.397058	1.268846	0.83821076	0.8587827	0.849526	1.1784707	0.7713382	1.2561204	1.3295657	1.297268	1.9942705	0.9351781
Phase-1 RCT-76	1.107145	1.0248134	0.7462849	0.778833	1.2114402	1.7847707	1.05115097	0.7243406	0.6772247	0.8957006	1.2092658	0.78571755
Vacuole membrane protein 1	1.803443	1.6023317	0.9877616	0.65761376	0.7147252	0.78137034	1.1906288	1.1012614	0.8142948	0.9522053	1.239048	0.8951622

Table 29

Phase-1 RCT-158	1.0434004	0.97352433	0.9289761	1.0485468	1.1875916	1.0194917	0.989426	0.93544525	1.3861774	1.2165847	0.9258701	1.0496894	0.95589896
Phase-1 RCT-113	1.0829448	1.0110084	0.8786866	0.96244276	1.2233822	0.9318434	0.9957277	1.0386283	0.9297939	0.94119567	0.9663431	0.8838881	0.8107878
Endogenous retroviral sequence, 5' and 3'	0.8756684	0.8849374	0.7412376	0.73811924	0.72655797	0.72291803	0.78644437	1.307152	0.7023762	0.8040537	1.3956914	0.8339272	1.0410379
UTR	0.51587474	0.50655134	1.0311806	1.0654813	1.1502745	1.081881	0.92146426	0.907762	0.71930847	0.76302286	1.2780128	0.81171884	0.8514357
Beta-actin	0.90322584	1.1182377	0.9864174	0.8596532	0.9628824	1.0422832	0.98105102	1.0602915	1.0635049	1.1311435	1.0710588	0.98537263	0.8358417
Phase-1 RCT-65	0.41233346	0.48589122	0.8586252	1.1083245	1.3219574	0.9906872	0.9886885	1.0059087	0.9374352	1.0553381	0.9682487	1.0158764	1.002402
MHC class I antigen RT1.A10 alpha-chain	0.8251528	0.8541078	1.1723841	1.3018605	1.2287782	0.7397466	0.9250983	0.7300965	0.7539665	0.7800917	0.9297409	0.98023956	0.9894183
Bax (alpha)	0.8377288	0.8667449	1.2765831	1.48294	1.1874046	1.1659575	0.92050856	0.7850811	0.906503	0.8447568	0.8935434	1.0295571	1.0184886
Carbonyl reductase	1.1044931	0.8606997	0.9279837	0.78310645	0.77020067	1.1919233	1.1045319	1.0167222	0.9126183	0.87675323	1.0932562	0.870807	0.76307146
Beta-actin, sequence 2	0.60293245	0.5318666	1.2370553	1.5390557	1.5531251	1.191281365	0.79288447	0.78284668	0.8313957	0.8140281	0.9641201	0.89440995	0.8803787
Interleukin-10	1.2863288	1.3249489	1.079228	1.0668122	1.1078466	1.0070107	0.843286	0.87294316	0.820135	0.891997	0.9401304	0.9251101	0.8495165
Phase-1 RCT-181	1.0849094	0.9738063	0.70465684	0.77520996	1.1194713	0.87028515	0.89517784	0.8686971	0.71387815	0.70880204	0.9830867	0.7374187	0.88094295
Phase-1 RCT-111	1.372824	1.3450072	0.9789223	0.91867094	0.8183558	1.4438086	0.9216256	1.0866348	1.0984889	1.0477608	1.2364206	1.0855018	1.3541455
Apoptosis-regulating basic protein	1.470799	1.4859592	0.73863104	0.82807504	0.3822653	1.5776839	0.8891362	1.01074	0.9126832	0.937862	0.93589856	0.7754941	0.7583875
Glutathione peroxidase	1.1248585	1.091172	0.880701	0.70678816	0.85833144	0.92616034	0.8891362	1.01074	0.9126832	0.937862	0.93589856	0.7754941	0.7583875
Phase-1 RCT-239	1.1968185	1.3200202	1.0892409	1.14571	1.1065364	1.0810108	0.9832227	0.87415839	0.97310794	0.9899054	1.1639221	0.90370045	0.972687
Phase-1 RCT-67	0.7721864	0.84274846	0.9421056	0.8831107	0.7105801	0.84716366	1.0247253	0.86604697	1.072822	1.0003046	1.1639221	0.90370045	0.972687
Tryptophan hydroxylase	0.66084415	0.7575385	0.9832882	0.90643924	1.0169272	1.3205312	1.3480686	1.1651949	0.89547414	0.9417607	0.9522582	0.77876765	1.4240992
Sulfotransferase K2	0.89684486	1.0959031	0.9570442	0.7748912	0.835995	1.0808536	1.0434014	0.8746762	1.0820426	0.9805035	0.9327187	1.0334874	1.0089153
Calgranulin B9	1.2478033	1.3877628	0.9346349	1.501405	1.057038	1.1204118	1.0252614	0.9465917	0.894195	0.8266801	0.8412846	0.8301562	0.8091562
Phase-1 RCT-123	1.1043575	1.2389179	0.8938188	0.82351805	1.0354167	1.1923728	0.9537168	1.0225188	0.8165625	0.894195	0.8266801	0.8412846	0.8301562
Phase-1 RCT-98	0.95319246	1.1308475	0.8938188	0.82351805	1.0354167	1.1923728	0.9537168	1.0225188	0.8165625	0.894195	0.8266801	0.8412846	0.8301562
Aquaporin-3 (AQP3)	1.3838328	0.47223333	0.4009233	0.26394305	0.19297509	1.8441554	0.12640837	0.054718282	0.05047825	0.046683915	0.26070574	0.30710745	0.0680842
Stearyl-CoA desaturase, liver	0.9440486	1.0353766	0.92882266	0.8850488	0.802448	1.0817747	0.82114833	0.7806588	0.7334428	0.8246445	0.9230268	0.890632	0.7908823
Phase-1 RCT-84													
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5)													
(2) Compound and dose abbreviations as in													
Table 1													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-neer,													
necrosis observed; yes-both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 23

Table 29. Expression Data for 24 Hour													
Timepoint (1)													
Compound/Dose (2)	GEN 150	GEN 150	GEN 150	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250	HYD 250
Animal Number (3)	234	235	236	1224	1224	1224	1224	1224	1224	1224	1224	1224	1224
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Genia Name (5)	1.2702836	0.5988923	0.9363557	0.76687406	0.9302737	0.769393897	0.769393897	0.769393897	0.769393897	0.769393897	0.769393897	0.769393897	0.769393897
Gamma-actin, cytoplasmic	0.74720395	0.5500887	0.911815	0.9063122	1.0724159	0.9700469	0.9700469	0.9700469	0.9700469	0.9700469	0.9700469	0.9700469	0.9700469
Phase-1 RCT-145	1.0380977	0.96901944	0.9641115	0.8285172	1.0562828	0.72824	0.72824	0.72824	0.72824	0.72824	0.72824	0.72824	0.72824
Gad45	0.93524146	1.0513558	1.2082616	1.0661025	1.0353534	1.0353534	1.0353534	1.0353534	1.0353534	1.0353534	1.0353534	1.0353534	1.0353534
Phase-1 RCT-78	1.1097461	1.234744	1.3086711	0.9073492	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570
Fas antigen	1.1146048	1.2084594	1.3086711	0.9073492	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570	0.9282570
Macrophage inflammatory protein-2 alpha	1.2213789	1.2302574	1.1724662	0.7889103	1.011055	1.007664	1.007664	1.007664	1.007664	1.007664	1.007664	1.007664	1.007664
Integrin beta1	0.6860265	0.97748315	0.91219558	0.9298088	1.0920497	1.018389	1.018389	1.018389	1.018389	1.018389	1.018389	1.018389	1.018389
Aspartate aminotransferase, mitochondrial	0.7311086	0.78348966	0.8085941	0.8672665	1.0423485	1.289071	1.289071	1.289071	1.289071	1.289071	1.289071	1.289071	1.289071
Caselin-alpha	0.8728263	0.78047374	0.8300747	0.85414596	1.0530596	1.3943182	1.4437972	1.4437972	1.4437972	1.4437972	1.4437972	1.4437972	1.4437972
Malic enzyme	0.9252576	0.7160089	0.79567537	0.79567537	1.1979625	1.1403476	1.1403476	1.1403476	1.1403476	1.1403476	1.1403476	1.1403476	1.1403476
Phase-1 RCT-30	1.1057886	1.1066693	1.121545	0.9603044	1.1365467	1.1671877	1.1671877	1.1671877	1.1671877	1.1671877	1.1671877	1.1671877	1.1671877
Hepatocyte growth factor receptor	0.9989994	0.95295775	1.0449091	0.83180344	0.9895312	0.86762134	0.86762134	0.86762134	0.86762134	0.86762134	0.86762134	0.86762134	0.86762134
MAP kinase kinase	1.2569185	1.5204399	0.810739	0.8365764	0.8746255	0.8746255	0.8746255	0.8746255	0.8746255	0.8746255	0.8746255	0.8746255	0.8746255
Sodium/glucose cotransporter 1	0.92045273	1.8653121	2.0813584	0.41391873	0.47855267	1.3658248	1.3658248	1.3658248	1.3658248	1.3658248	1.3658248	1.3658248	1.3658248
Phase-1 RCT-50	1.0060835	0.93231488	0.8741948	1.2220884	1.046855	1.0242348	1.0242348	1.0242348	1.0242348	1.0242348	1.0242348	1.0242348	1.0242348
Phase-1 RCT-192	1.188597	1.2200744	1.015702	0.8140814	0.8477501	0.9386834	0.9386834	0.9386834	0.9386834	0.9386834	0.9386834	0.9386834	0.9386834
Phase-1 RCT-288	1.1376855	1.7076485	1.425079	0.9810932	1.0711797	0.9810932	0.9810932	0.9810932	0.9810932	0.9810932	0.9810932	0.9810932	0.9810932
Phase-1 RCT-37	1.1978749	0.9125728	0.9988435	1.0883016	0.9278949	1.0052736	1.0052736	1.0052736	1.0052736	1.0052736	1.0052736	1.0052736	1.0052736
Organic cation transporter 3	1.1273324	0.92731154	1.0307205	0.7084236	0.9785532	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574
GUS ribosomal protein L6	1.1303384	0.926274	1.0307205	0.7084236	0.9785532	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574	0.8776574
Zinc finger protein	0.9375411	1.285257	1.063573	1.1412095	1.0519023	1.106215	1.106215	1.106215	1.106215	1.106215	1.106215	1.106215	1.106215
Calgranulin B2	0.850107	0.92490865	0.7513274	1.1256252	1.07672	1.048455	1.048455	1.048455	1.048455	1.048455	1.048455	1.048455	1.048455
ID-1	0.7407284	1.0705792	1.256251	1.0303708	1.0610521	1.1400918	1.1400918	1.1400918	1.1400918	1.1400918	1.1400918	1.1400918	1.1400918
Phase-1 RCT-42	1.0863873	1.3392879	1.1296887	1.0517081	1.1688539	0.91180503	0.91180503	0.91180503	0.91180503	0.91180503	0.91180503	0.91180503	0.91180503
Phase-1 RCT-115	1.0909951	1.2004038	0.9681954	1.188103	1.0242902	1.1688276	1.1688276	1.1688276	1.1688276	1.1688276	1.1688276	1.1688276	1.1688276
Merlin F/G	1.0079609	0.92834424	1.096076	0.9130963	0.7689877	0.92065203	0.92065203	0.92065203	0.92065203	0.92065203	0.92065203	0.92065203	0.92065203
Mitf, homologous (MLH1)	1.2170781	1.0719775	1.0041504	1.0331571	1.8331661	1.3310751	1.3310751	1.3310751	1.3310751	1.3310751	1.3310751	1.3310751	1.3310751
Phase-1 RCT-79	0.93228734	0.7221188	0.8025543	0.95302953	0.8075969	1.0290707	1.0290707	1.0290707	1.0290707	1.0290707	1.0290707	1.0290707	1.0290707
Sorbitol dehydrogenase	1.2519358	1.1406515	1.5211089	0.8496248	1.0044183	1.0453608	1.0453608	1.0453608	1.0453608	1.0453608	1.0453608	1.0453608	1.0453608
Phase-1 RCT-24	0.95762	0.91492784	0.82189	0.9042007	0.97351235	1.009348	1.009348	1.009348	1.009348	1.009348	1.009348	1.009348	1.009348
Calgranulin B1	1.0879658	1.0546843	0.929584	0.8808656	0.9401599	0.9283467	0.9283467	0.9283467	0.9283467	0.9283467	0.9283467	0.9283467	0.9283467
Elongation factor-1 alpha	1.1686779	1.082381	1.262189	0.84318477	1.0575543	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837
L-glutathione S-transferase	0.97389925	0.7885825	0.95901406	0.9505547	1.0575543	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837	0.7439837
Phase-1 RCT-33	1.1751765	0.7837893	0.9402119	0.8399993	0.9821356	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564
Phase-1 RCT-233	0.9989491	0.9985685	1.052074	0.8226851	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564	0.88701564
Phase-1 RCT-38	1.100166	0.81084694	0.96557014	1.087737	1.0955002	0.9205775	0.9205775	0.9205775	0.9205775	0.9205775	0.9205775	0.9205775	0.9205775
Phase-1 RCT-242	0.71877705	0.8528385	0.85960305	1.2176791	1.3520182	1.0484416	1.0484416	1.0484416	1.0484416	1.0484416	1.0484416	1.0484416	1.0484416
Phase-1 RCT-181	1.0667887	1.0034891	1.055145	1.1272728	0.94010043	0.9271485	0.9271485	0.9271485	0.9271485	0.9271485	0.9271485	0.9271485	0.9271485
Phase-1 RCT-185	1.0175978	1.0495721	0.83521795	0.200658	0.8490959	0.8683634	0.8683634	0.8683634	0.8683634	0.8683634	0.8683634	0.8683634	0.8683634
Phase-1 RCT-179	1.151202	1.273537	1.1303053	0.8866561	0.8561955	0.9834368	0.9834368	0.9834368	0.9834368	0.9834368	0.9834368	0.9834368	0.9834368
Phase-1 RCT-144	0.83904237	0.8317341	0.8745768	0.98610528	1.0557332	1.015557	1.015557	1.015557	1.015557	1.015557	1.015557	1.015557	1.015557
Phase-1 RCT-225	1.0166115	0.6802352	0.7139208	0.8672797	0.7946403	0.138888	0.138888	0.138888	0.138888	0.138888	0.138888	0.138888	0.138888
Phase-1 RCT-225 (alternate done 1)	0.84428755	1.1305418	0.6778111	1.3345952	1.285892	1.036237	1.036237	1.036237	1.036237	1.036237	1.036237	1.036237	1.036237
GUS ribosomal protein L8 (alternate done 1)	1.2115475	0.8855131	1.0823371	0.81789815	0.85122438	1.0134186	1.0134186	1.0134186	1.0134186	1.0134186	1.0134186	1.0134186	1.0134186
Beta-tubulin, class I	1.0591851	0.9518901	0.70406963	0.97587125	1.1258496	1.1900632	1.1900632	1.1900632	1.1900632	1.1900632	1.1900632	1.1900632	1.1900632
Multidrug resistant protein-2	1.0382733	1.05017	1.4039835	0.7760969	0.9476298	0.81804068	0.81804068	0.81804068	0.81804068	0.81804068	0.81804068	0.81804068	0.81804068

Table 29

Phase-1 RCT-49	0.9035108	0.9641152	0.9724265	1.0593439	0.9832869	1.0513809	0.9433959	1.0876163	0.9830245	0.8888272	0.9161264	1.0405135	1.0135181
Calgranulin B3	0.7505626	0.95077413	0.9433039	0.9594674	0.9905155	1.1505667	1.204804	1.0132308	0.96360976	1.0108196	0.9537236	0.9178016	0.8082931
NADP-dependent isocitrate dehydrogenase, cytosolic	1.1117726	1.2810171	1.0889939	0.94356096	0.9016394	0.9137597	1.0431974	0.9697644	0.9170391	0.9015406	1.0127689	0.90042126	0.80826375
Oxysterol binding protein 1	1.1131318	0.88388747	1.1553645	1.1651145	1.11794	0.9293768	0.9367259	0.9802879	0.95207435	1.0692574	1.1309267	1.0674295	1.2995139
Sodium/ATP cotransporter	0.9928173	1.2238286	0.6997392	0.8149502	0.839996	0.87054626	0.9859971	0.903415	0.9028674	0.8191688	0.9097055	0.907307	0.787307
Phase-1 RCT-17	0.9815509	1.017731	0.9915848	1.0028915	1.0664668	0.9877175	1.0282135	1.204103	0.9401646	0.83945054	0.8440448	1.0893668	1.0818905
Phase-1 RCT-174	0.9489244	0.7559252	0.7991054	0.8830033	0.9477934	0.84702414	1.0295277	0.9649005	0.83918166	0.8257128	0.78770726	0.8639478	0.80762959
Inositol polyphosphate multikinase (pmk4)	1.1302369	1.162097	1.5427473	0.84404606	0.8338263	0.8830332	1.0562463	0.63718724	0.79883363	0.9198775	0.88150688	0.95490134	0.8839475
Phase-1 RCT-256	0.988822	0.9276526	0.87148225	0.83078036	1.0040274	0.86912084	0.86418956	0.9444713	1.0300735	1.105057	1.1950034	1.0152988	1.2191854
Equibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.8110661	1.0901519	0.8949468	1.0855555	0.88139546	0.95446026	1.0804304	1.1566039	0.90966314	0.905031	0.8184449	0.9190189	0.8099765
CDK102	1.1246629	1.0625552	1.1186306	0.89780986	0.9655882	0.9510749	1.0303564	0.88378226	1.0293167	1.0009392	1.130519	1.2077318	1.2715989
Phase-1 RCT-209	1.0638688	1.1160479	1.0241308	1.1472267	1.161848	0.9739681	1.1012989	0.98262657	0.96201945	1.0915806	0.9657764	1.0555557	0.8417922
NADH-cytochrome b5 reductase	1.0186122	0.75765416	0.8629723	0.87794515	1.0616492	1.0081551	0.978786	1.0029769	0.85131794	0.7659769	0.8570639	1.13816	1.0811009
Dynamin-1 (D100)	1.0976964	1.12729	1.0962949	1.0989808	1.0874774	0.93843025	0.9704611	0.8806246	0.8577177	0.8284474	1.0373116	0.94250554	0.96200585
Sensescence marker protein-30	1.244287	1.388354	1.2559265	0.8405278	0.93605764	0.7777746	0.99379164	0.7182484	1.323312	1.019383	1.239228	0.9022477	0.886805
Phase-1 RCT-89	0.8022881	1.1569375	1.0037238	0.9269579	0.9887574	0.9804561	1.1150047	0.94103913	0.92907136	1.009242	1.0450771	1.0140605	1.1050774
Camellia palmitoyl-CoA transferase	1.7831252	1.1160477	1.3098538	1.1647052	1.051635	1.2268768	0.9789807	0.7978907	1.0420814	1.2696422	1.0101001	1.0629819	0.9375202
Alpha-2-microglobulin	0.4055156	2.0323706	1.5287999	0.7876321	1.5166618	0.97238437	1.2350405	0.6228882	0.6327346	0.8688065	1.2681534	0.8034054	0.8034054
Apolipoprotein CIII	0.8069858	0.9984127	1.0208763	1.0283476	1.1433631	1.0366315	1.0110352	1.001873	0.82458305	1.0124717	0.9433934	0.81539539	0.78186836
Cathepsin L, sequence 2	1.3700572	1.3322263	1.4139736	0.91633964	0.71246765	0.80182993	0.9532248	1.0014743	0.8882896	0.8295355	0.902206	0.7011204	0.747177
Phase-1 RCT-141	0.8700716	1.1371717	1.3994268	1.4447158	1.1709811	1.1046281	1.0651023	1.5896978	0.989091	1.0188974	1.0830874	1.2015887	1.2192571
Phase-1 RCT-289	0.952905	1.1778196	1.143118	1.0802376	1.3068935	0.8110633	1.1559443	0.9869972	0.989091	1.0188974	1.0830874	1.2015887	1.2192571
Endothelin-1	0.9452785	1.0576198	0.9819329	1.207652	1.3182147	0.9906357	1.1083933	1.0135996	1.167162	1.050709	1.287345	1.4308085	1.0276903
Phase-1 RCT-282	0.83314186	0.7304215	0.8049636	1.1563141	0.9872885	1.0746703	0.98393585	1.1328361	1.2774137	0.9201248	0.8502055	1.2989319	1.1850716
Phase-1 RCT-140	0.7439168	1.1154999	0.8676517	0.9108089	0.99093544	0.8933525	1.2996311	0.8439382	1.0066216	1.031068	0.97843395	0.89518449	1.0009311
Cyclin D1	1.0187466	0.87342864	0.83279556	1.0076578	1.0693961	1.0596178	0.965207	0.8175439	1.0176628	1.0081055	0.7659047	0.8851854	0.72254395
Phase-1 RCT-287	0.94284107	0.744214	1.030503	0.9891974	0.8717947	1.1617852	0.9457136	0.7361027	0.81774464	0.9893538	0.92360495	0.8259006	0.8282737
Phase-1 RCT-281	1.1416336	1.1594089	1.07954	0.90728703	0.9197585	0.90147114	0.8946102	0.8403937	0.9450719	1.058932	0.7954658	0.8714895	0.8714895
Retinol-binding protein (RBP)	1.0860132	1.2057088	1.0210284	0.8270089	1.0405851	0.7603455	1.1195494	0.80551838	0.86284007	0.8047768	0.71810053	0.9542623	0.7491064
ATP-stimulated glucocorticoid receptor translocation promoter (GyS)	0.8223846	1.4152279	1.4266607	0.83774336	0.8864414	0.8997137	0.9770935	0.7278989	0.82443315	1.0147107	0.86389415	0.8701312	0.8761811
Phase-1 RCT-60	0.7167355	0.8555909	0.9038856	0.94979445	1.0989053	1.0526702	1.0831715	1.048879	1.0200008	0.91850126	0.8855577	0.9921762	0.8928818
Pyruvate kinase, muscle	0.722612	0.79956655	0.809454	0.9671666	0.909285	1.1075358	0.850882	1.0314786	1.0630391	1.1530824	1.0142734	1.016861	1.0502899
PAR intercalating protein	0.7776027	0.8567944	0.9602095	0.8471083	1.0078222	0.8590558	0.97311455	1.0033825	0.98159148	0.93966763	0.904671	0.98730904	0.9482912
Nucleoside diphosphate kinase beta isoform	1.2227043	0.9956796	0.7809755	0.9384845	0.97216185	0.89412806	0.9584973	1.2076992	0.9245014	1.0037469	0.9943929	0.8972064	0.900477
Gadd45	1.1184	0.92700884	0.9995337	1.050868	1.1407677	1.0127143	0.9793034	0.8189498	1.1825036	1.1234419	1.2247586	1.08311	1.0854631
Insulin-like growth factor binding protein 1	1.4345232	2.0921576	1.0615083	1.0410452	0.95823544	1.084	1.0188905	0.871158	0.94866794	1.0242032	0.91881345	0.7335578	0.81841034
Co-Hras	1.0575941	0.89773905	1.0956918	0.866343	0.97994375	0.95241804	1.0354462	0.90770775	0.99749345	1.0415013	1.0011933	1.0295682	1.15293035
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.88164437	1.2897497	1.0028814	1.0628104	0.9025569	0.8921995	1.1037802	1.0191003	0.83698285	0.88770276	0.8866919	0.8734899	0.7181782
Phase-1 RCT-52	1.3557001	0.8826883	0.988794	1.0522584	0.76201206	1.0317308	1.0559928	0.8562437	1.0079169	0.9220461	0.96369104	0.9847068	0.9782465
Alpha 1 - inhibitor III	0.88005628	1.1766325	0.8437124	0.83543295	0.9544944	0.8765229	0.80410594	0.7076853	1.0076853	1.0766128	0.9356605	0.5285459	0.5299165
Sialin carrier protein 2	1.1095537	1.0020678	1.0064154	0.92193884	1.0197444	0.85741395	0.9451804	0.9011237	0.82231605	1.0184975	1.1678137	0.71028005	0.81099373
Organic anion transporter 3	1.1187407	1.0294971	0.8862291	0.8401815	0.778048	0.85176517	1.0557804	0.8243237	1.1395832	1.1684703	0.9552746	1.3530952	1.2022872
Calgranulin B4	1.1493657	0.9719885	0.9084905	1.1165346	1.0576253	1.1579480	1.0738946	0.941444	0.9238302	1.0860199	1.078079	0.86649	1.1935552
Phase-1 RCT-162	0.89720577	0.9338546	1.0664732	0.8823813	0.9195814	0.82567465	0.92718923	0.8350927	0.81223404	0.83947117	0.9859459	0.9505997	0.7679482
Calgranulin B8	0.850159	0.9115169	1.1785967	1.1906907	0.8810825	0.9140274	1.0629773	0.9537598	0.8196984	1.0700532	1.2006678	0.99157864	1.0409285
Adenylate dehydrogenase, mitochondrial	1.0212852	0.96167395	1.0366155	0.9679807	1.0180595	0.97370684	0.8945173	0.9007163	0.9604144	0.9152597	0.8944158	0.8907548	0.8907548
Phase-1 RCT-126	1.1650583	1.1886556	1.125991	0.98781335	0.9231682	0.8150396	0.9813922	0.8352602	0.843147394	0.8913848	1.038648	0.82896674	0.81167114
Phase-1 RCT-102	0.8075329	1.1497539	0.7008995	1.2227176	0.8841807	0.98523085	0.81456284	1.4256184	1.1631548	1.2033472	1.4304422	1.4304422	1.2307797
Preproalbumin, sequence 2	1.0234745	1.3244703	1.1841422	0.887009	0.918849	1.0117887	0.86917937	0.65530937	0.75153494	0.9548956	0.7810226	1.3611115	1.0348523
Apolipoprotein AII	1.833447	1.6234235	1.3554184	0.765106	0.87084734	0.6565382	0.81816316	0.69438758	1.2033402	1.0742275	0.98715204	0.8407447	1.0348523
Phase-1 RCT-10	1.115572	1.47564	1.450461	0.9665226	0.8378787	1.0505089	1.0484662	0.8607887	0.8640747	1.0742275	0.98715204	0.8407447	1.0348523
Phase-1 RCT-48	1.6863747	1.8654787	1.3337924	1.1499543	1.4814893	0.92594284	1.1625568	0.9046681	1.2125468	1.1988762	1.2521398	1.3124697	1.3517832
Phase-1 RCT-3	1.0594101	1.3829082	1.1708002	0.9540422	0.96511793	1.0657654	1.1178143	0.718768	0.792023	0.8501004	0.7819844	0.86059308	0.854054

Table 29

Phase-1 RCT-168	0.84065604	0.88009898	1.16380551	1.03489044	1.10022086	1.10471334	1.03547448	1.04330973	1.03228555	1.02540228	1.05943111	0.97380015	1.21828564
Phase-1 RCT-169	1.09465724	1.45475448	1.26784	1.0965971	0.93397045	0.80873495	1.007487	0.9333916	0.9709692	1.0028412	0.9076848	1.0592301	1.0636899
Beta-alanine synthase	1.6043997	1.9604373	0.79492547	0.46309443	1.0008141	0.1043763	1.0146322	1.0146322	1.1167145	1.0712222	1.2936279	1.8477233	1.3857671
Phase-1 RCT-298	1.2385194	1.604609	0.78412647	0.94525747	0.8324739	0.8901228	0.8189391	0.8189391	0.8189391	0.8189391	0.8189391	0.8189391	0.8189391
Carbonic anhydrase II	0.44392034	1.6906607	0.78412647	0.94525747	1.3014743	0.52857848	1.4373379	0.76540256	0.9608338	1.0276227	1.437378	0.92884176	1.0724095
Phase-1 RCT-291	0.8456612	0.8456612	0.99152267	0.6868417	0.9240173	0.8713204	0.9027695	0.9027695	0.9027695	0.9027695	0.9027695	0.9027695	0.9027695
Carbonic anhydrase III, sequence 2	1.2786609	1.555703	1.3459808	1.0553266	0.5781079	0.98534435	0.98534435	0.98534435	0.98534435	0.98534435	0.98534435	0.98534435	0.98534435
Phase-1 RCT-271	0.85976017	0.7572687	0.52788559	0.7833346	0.84718926	0.6852008	0.9519366	1.2707808	0.9527861	1.0058054	0.8527868	0.8218332	0.85345197
HMGR-CoA synthase, mitochondrial	0.82812923	0.99324024	1.5427854	0.88214047	1.0350075	1.1001743	0.80759054	0.72492045	0.8578224	1.2178248	0.9097082	0.9865859	1.13825905
Phase-1 RCT-189	0.8481671	1.1903716	0.8113708	0.99551433	1.0355072	0.9955072	1.1124154	0.9274708	1.0262027	1.0594009	0.9169716	0.78421455	0.7822837
Phase-1 RCT-40	1.1573904	1.4806337	1.2114836	0.9542328	0.6944927	0.8666231	1.1433935	0.9270871	0.8517248	0.7907021	0.8059236	0.8708082	0.8521345
Urinary protein 2 precursor	1.5637998	1.7302519	0.8217653	0.9412274	0.9271659	0.8805025	0.8825305	1.0719666	0.7399393	0.7879071	0.8522377	0.7212046	0.6344304
Paraoxonase 1	0.985834	0.9861016	1.089469	0.8021673	0.8265013	0.7688113	0.8397236	0.7640988	0.8197056	0.8579436	0.9522877	0.7212046	0.6344304
Liver fatty acid binding protein	2.4441092	2.0403391	1.4040172	0.68075473	0.7834533	0.9840876	0.98431583	0.7265947	0.6904703	1.0102272	1.0855236	1.0369311	0.98397665
Presenilin-1	0.8788759	1.1620302	0.84174045	0.86300766	0.94149333	0.8810114	0.87282396	0.6022842	0.68035265	0.9036386	0.93228705	0.51195566	0.50189383
Phase-1 RCT-38	1.0200139	0.86668223	0.824148	0.92765666	0.9687327	0.9111178	0.96490175	1.046939	1.0951434	1.0212684	1.2862306	0.96695904	1.1878598
Phase-1 RCT-270	0.8305639	1.039462	1.1381116	1.0113083	1.1271573	0.8594698	1.1029173	0.87998738	0.7876365	0.7782328	0.7506251	0.74069728	
Transferrin	1.182613	1.4871801	1.2497473	0.7778149	0.9214144	0.77605225	0.88059807	0.8328885	0.8372345	0.7782328	0.7506251	0.74069728	
Hepatic lipase	0.88108456	0.7321705	0.8124817	0.83342797	0.8409493	0.8827411	0.6887075	0.83215165	0.8557157	1.0348941	0.8987887	0.5965308	
Cytochrome P450 11A1	1.0240899	1.086189	0.78875166	1.0009098	1.1302683	0.9652355	1.0724602	0.8402163	0.84902724	0.8273669	0.7212466	1.1011888	0.83290408
Phase-1 RCT-175	1.274576	1.2024239	1.1821849	1.0251148	1.0450282	0.9245302	1.1269246	0.856478	0.856478	0.856478	0.856478	0.856478	0.856478
Phase-1 RCT-117	1.3269714	1.7548465	1.5499606	0.84278566	0.66371604	0.8728482	1.031061	1.0301884	1.1392814	1.3749171	1.1821669	1.4288959	1.3554323
Phase-1 RCT-137	1.280027	1.24049	0.8075957	0.9468865	1.0743308	0.8430574	1.0317822	1.048511	0.85210796	0.9225142	0.9909355	0.8552747	0.7058342
Melanoma-associated antigen ME491	0.86373584	0.9489621	1.0727094	1.1214070	1.0240333	1.1955447	0.9312111	1.12439	0.8415554	0.8639532	0.7345863	0.8408212	0.89916818
Phase-1 RCT-12	1.046675	0.88147508	0.8225583	0.94483495	0.83722055	0.99801093	0.98594993	0.7494673	0.1015547	0.09111	1.209812	1.1394444	1.08917883
Phase-1 RCT-152	1.1893384	0.9580758	0.8925607	0.85287154	0.83722055	0.99801093	0.98594993	0.7494673	0.1015547	0.09111	1.209812	1.1394444	1.08917883
14-3-3 zeta	0.8942836	1.1781572	1.074189	0.87141293	0.822310	0.87598594	0.98184316	0.8350981	1.0159889	1.08171	0.732108	0.9775018	0.8843286
Cytochrome P450 2C23	1.5144022	1.177187	1.0608993	1.0942791	0.8873536	0.9905517	1.0080024	0.9286987	0.7691934	0.93078265	1.2082098	0.81701185	0.8609785
Voltage-dependent anion channel 2 (Vdac2)	1.3086264	1.06439	1.0559859	0.84019744	0.8428808	1.0745223	0.9050343	0.9936476	0.96807845	1.0266961	0.9428637	0.9631099	
Phase-1 RCT-154	0.74023265	1.0496657	0.9854688	0.99318796	1.061761	0.8735935	1.061276	1.2570788	0.9418498	0.8718424	0.80939176	1.0408293	0.8349719
Superoxide dismutase Mn	1.2963141	1.234454	1.3689215	0.9540775	1.0481609	0.8625435	1.097389	1.033545	0.9340434	0.9925498	1.0761425	1.0318398	1.055182
c-Myb	0.93519217	0.98840948	0.932215	1.1028724	1.1575606	0.8669386	0.8523903	1.0101562	1.1288445	0.93057245	1.0381058	1.1311183	1.0549872
Phase-1 RCT-196	0.8806607	1.1317788	0.96808293	0.9712234	1.1018085	1.0372078	1.0598814	1.1140508	0.97863685	0.9597437	1.0850762	0.9238474	
Cyclin G	1.0897768	0.9809014	0.9793995	1.0070475	1.1774526	1.2735089	1.0770138	1.1300818	1.1913975	0.9597248	1.164819	1.1178337	1.438332
Calgranulin B5	0.8426841	0.96069384	1.0069998	1.0070475	1.1774526	1.2735089	1.0770138	1.1300818	1.1913975	0.9597248	1.164819	1.1178337	1.438332
p53	0.92214274	0.9652913	0.8431112	0.8290238	0.88653925	1.068922	0.96915054	1.0281878	1.1170901	1.0284007	1.0373162	0.9435335	0.7837794
Phase-1 RCT-205	0.8820342	0.85365116	0.9108519	1.1215739	1.1375027	0.88659624	0.93659624	1.1389754	0.87421014	0.94639265	0.94668704	1.0491421	1.0418348
Phase-1 RCT-68	1.2087077	1.030592	1.278018	0.9420305	1.0812894	1.0211445	1.1762831	0.98660207	0.84020367	0.9509399	0.96525503	0.88855603	0.9795848
Caspase 3	0.8803707	0.8829637	0.85809505	1.165344	0.9941706	0.9424836	1.0326995	1.21912	1.0577402	1.0264008	1.205785	1.2291316	1.1938397
Alpha-tubulin	0.9573715	0.75477425	0.70944154	0.8670043	0.92880884	0.984175	0.96742713	1.7517807	1.3497024	1.2024685	1.2015872	0.8348025	0.82056594
Ribosomal protein L13A	1.4137654	1.421048	1.328438	0.8104424	0.85732	1.02045	0.9034005	0.9349457	0.9674274	1.0427498	1.122157	0.8749978	0.9151923
IgE binding protein	0.90697706	0.7637644	0.8367725	0.9581429	0.8392383	0.9628771	1.0232961	1.2071714	0.88324885	1.064878	1.0431485	1.2024381	1.1031132
Phase-1 RCT-39	1.0752845	1.2717332	1.0648916	1.0198925	0.9815837	1.0454087	1.1049377	1.005104	0.8384433	0.9831431	0.8888224	0.9788682	0.9114545
Helix oxygenase	1.050937	0.8338469	1.3069224	1.598924	1.008303	0.862806	1.216904	1.0401368	0.8384433	0.9831431	1.0400425	1.0588224	0.8929768
Phase-1 RCT-241	0.72688213	0.8484215	0.9124418	1.102604	1.1218424	1.0969808	1.1078037	1.1237997	1.077122	1.0831321	1.1070241	0.9853983	0.9400516
Ribosomal protein S9	1.2827181	1.1281371	1.0102783	0.96980184	0.97357786	1.014014	1.0585569	1.146871	0.8722428	0.94357884	0.81783645	0.8548823	0.82899263
Phase-1 RCT-258	0.7389426	0.8885012	0.9219119	0.84411623	1.0420799	1.4051087	1.0202287	1.0202287	1.0202287	1.0202287	1.0202287	1.0202287	1.0202287
Phase-1 RCT-72	1.1884321	1.3802234	1.755123	0.9588067	0.765754	0.98488877	1.0250008	0.8551165	0.8578202	0.98289863	1.2870094	0.84839986	1.0478921
Arginase-like lyase	0.93808885	0.9675874	1.0151885	0.97381034	1.2165888	1.2033177	0.9684245	1.131767	0.8997875	1.0565788	1.1429079	0.7937529	1.0471681
Mitochondrial protein-1	1.0386128	1.127873	1.369587	0.8607285	0.9240845	0.9724335	1.0016265	0.8687709	1.1637654	1.1232225	1.0789171	1.0144377	1.188183
Thymine decarboxylase	1.1253372	1.16708	1.071773	0.7838754	0.981266	0.8651812	1.040023	1.0687549	1.264718	1.1232225	1.0789171	1.0144377	1.188183
Thymosin beta-10	1.2976882	1.1688483	1.2924932	1.0391974	1.427506	0.9084098	0.9385493	1.055102	1.0439138	1.0489488	1.040224	0.8021378	0.76985955
Phase-1 RCT-109	0.92328425	0.7272395	0.7384659	1.0286527	0.80544986	0.779885	0.98763573	1.4557678	0.9681113	0.97420077	1.0043231	1.2023968	1.1996327
Phase-1 RCT-78	1.2253347	1.1780587	1.1780587	1.1780587	1.0083173	0.89183736	0.85916114	0.96816114	0.9288586	1.0021844	0.9627958	0.96391587	
Vacuole membrane protein 1	0.84437176	0.9586274	0.9256284	0.7472213	0.7503434	0.8324594	0.8087292	0.81157285	0.9411392	1.0219846	1.0421382	0.78573758	0.8922478
	0.9210368	1.17233	0.9337484	0.85384074	1.0197811	0.90808778	1.0736228	1.1827416	0.7521176	0.7017457	0.73068376	0.9080166	0.7144388

Table 29

Phase-1 RCT-158	0.66185923	0.9700287	0.8789747	1.1776724	0.884982	1.030765	1.0872382	0.9579051	1.0168063	1.0162088	0.94729143	1.0809782	1.0335937
Phase-1 RCT-113	0.80044	0.82196745	1.0043885	1.0460893	0.854918	1.0304275	1.0719352	0.9525875	0.9275319	1.0092258	0.8460055	0.8318955	0.8229574
Endogenous retroviral sequence, 5' and 3'	0.8782672	1.2246805	1.0576297	1.0768603	0.8874615	0.8465937	0.99321085	0.85298073	0.8866827	1.1340623	1.0196021	0.8513687	1.0279377
LTR	1.2112511	0.9523154	1.039192	0.8045793	0.98306304	0.83742505	0.9728326	0.9561148	0.8947739	1.0470552	1.0591486	0.8745468	0.74550587
Beta-actin	0.9787127	0.83982977	1.074891	1.0456671	0.9322175	1.1789769	1.1039526	1.0191324	1.2487288	1.1730624	1.1810716	1.140557	1.3204659
Phase-1 RCT-55	1.3847288	1.4891025	1.1155107	1.187581	0.9677294	1.1855829	1.0599222	1.1407367	1.5316396	1.5088453	1.278859	1.2659328	1.3743788
MHC class I antigen RT1A1(I) alpha-chain	1.0850557	0.9463466	0.9335294	0.96037847	1.1219188	1.1170973	1.0068831	0.7727181	1.3098528	1.181285	1.2065555	0.984876	1.2154232
Bax (clbba)	0.8218483	0.9495653	0.84681087	1.132738	1.055502	1.1249284	1.1035372	0.8331498	1.1370302	1.0101993	1.0561584	0.9547021	0.89553744
Cardiomyocyte	1.1869748	0.87847847	0.9942967	0.8476905	0.9871708	0.84585583	1.022719	1.1220148	1.0069226	1.0326213	1.049887	0.83140105	0.9974354
Beta-actin, sequence 2	0.87634463	0.96845137	1.0477495	0.994913	1.0058454	1.036691	0.898076	0.7833881	1.151432	1.154472	1.0911233	0.88778737	0.8727874
Interleukin-10	0.9176829	0.91685814	0.95823455	1.119819	1.2205441	1.1571751	1.0781744	1.0791872	1.0272368	0.9855303	0.98309844	1.0519683	1.1723387
Phase-1 RCT-191	0.94584537	0.85225934	0.81821663	0.7806972	0.7899545	0.91603138	0.8306917	0.7215341	0.9196226	1.0331268	1.0893724	0.8341245	0.93303833
Phase-1 RCT-111	1.055647	1.1804605	1.0317795	0.9700572	0.9197593	0.9531876	1.0253714	1.1037625	0.72551674	0.7790015	0.738749	0.951435	0.6873325
Apoptosis-regulating basic protein	1.4489778	1.271341	0.6951654	0.8915086	0.83061403	0.8984461	0.8287714	0.8780573	1.11503	1.1948129	1.5335505	1.0772269	0.9913603
Glutathione peroxidase	0.831528	0.9372528	1.022839	1.083111	1.1812822	1.2368444	0.87289913	0.95738107	1.0151432	1.1614729	0.9522174	0.9801168	1.2601181
Phase-1 RCT-239	0.74497527	0.886886	0.828581	1.1761992	1.1780342	1.0562395	1.0678418	1.1805832	0.9815478	0.9207137	0.9185731	1.113898	1.1029582
Phase-1 RCT-87	1.0691231	0.84576347	1.0653153	0.9807621	0.9244295	0.9045114	0.994653	0.9528621	0.83159044	0.755026	1.2148254	1.0016134	1.094271
Tryptophan hydroxylase	1.1041638	1.5164465	1.143243	1.0014784	0.86013014	0.8912722	1.0608377	0.6342107	0.8449709	0.90485597	0.9577213	1.2163014	0.6651891
Sulfotransferase K2	0.8003511	0.8984126	1.0783855	1.1880676	0.9446891	0.9634938	1.022457	1.014478	0.9219828	1.0210114	1.031204	1.0287208	1.0751382
Calgranulin B8	0.9840272	0.95242268	0.8345736	1.1530699	1.1157596	1.1419148	1.2894577	1.104733	1.0001745	0.9882874	0.9538114	1.108561	1.1538095
Phase-1 RCT-123	1.0082708	0.93524003	0.9872265	1.040549	0.9703269	0.9523316	0.8560044	0.8560044	1.0625381	0.9882147	1.0491878	1.054389	1.1278556
Phase-1 RCT-98	0.9766598	0.84946144	0.93530394	1.1099878	1.0583375	1.0375359	1.0878399	0.99781805	1.0107118	0.9808422	0.94482875	1.0844895	1.0948906
Aquaporin-3 (AQP3)	0.82795038	0.17317882	0.08652063	0.9234218	1.3080855	1.4587854	0.9180189	1.2807087	0.4816812	0.8938251	1.0535356	0.3785573	0.30454892
Steady-CoA desaturase, liver	1.1463044	0.7713191	0.79589236	1.1597813	1.0597410	1.1571324	1.1043808	0.9984186	0.9512885	1.0032088	1.0731648	0.881597	1.0662081
Phase-1 RCT-84													
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-no, necrosis													
observed; yes-both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 29

Table 26. Expression Data for 24 Hour Timepoint (1)													
Compound-Dose (2)	ISON 200	KETO 20	KETO 20	KETO 20	KETO 20	KETO 80	KETO 80	KETO 80	KETO 80	LPS 2	LPS 2	LPS 2	EST 0.1
Animal Number (3)	1956	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)													
Gene Name (5)	0.81980353	1.1659275	1.008909	1.066492	1.3458477	1.184166	1.0273638	1.4728116	1.2985538	1.0561625	0.8396725	1.2726216	0.9196373
Gamma-actin, cytoplasmic	0.9861513	0.9818517	1.011452	0.9859617	0.9848278	0.8678733	0.98468607	1.1258441	1.3158165	1.0964004	0.89895763	0.8101653	0.82087
Phase-1 RCT-145	0.822802	0.81708075	0.830314	0.9052816	1.2390478	0.9054078	0.74518116	0.8678016	1.2772439	0.98532474	0.87304916	0.7607688	0.8417025
Gad64/5	1.0377523	1.0118381	0.816363	1.035408	1.0254543	0.83332005	0.8411967	0.8254854	0.923822	0.7813929	1.015147	1.0304314	1.1373146
Phase-1 RCT-78	0.9702953	1.117694	0.971016	1.085591	1.1050112	1.259138	1.1101397	1.5074538	1.5125873	1.3780355	0.8435948	1.0709106	1.0974652
Pas antigen	1.0896603	0.9529995	0.897473	1.0371416	0.99722984	1.0656035	1.1011482	0.9760901	1.9739816	0.9759847	0.90451324	1.008894	1.011855
Macrophage inflammatory protein-2, alpha	1.0344393	1.1648862	1.1730943	1.3319618	1.2326119	1.2749877	1.3853216	1.0486841	1.8701841	1.7242453	1.017669	0.9617203	1.2238302
Integrin beta1	1.1958573	1.0381837	1.1365409	1.0940908	1.0538605	1.1863881	1.0710576	1.048158	1.0363567	1.225818	0.84307384	0.7455412	0.67223334
Phase-1 RCT-207	0.7474677	0.9393543	0.9189776	0.9503369	0.9208142	0.83588986	1.0110956	1.020591	1.0485985	1.0712369	1.2853083	1.461474	1.5003353
Aspartate aminotransferase, mitochondrial	1.1986328	1.0475882	1.0524218	1.033398	1.0028352	0.9444168	0.97343327	1.020591	1.0485985	1.0712369	1.2853083	1.461474	1.5003353
Casein-alpha	1.1051248	0.8145843	0.941238	0.92794684	0.9826604	0.8381218	0.874493	0.7752546	0.9683234	0.8501989	0.99719908	0.650885	0.5165728
Phase-1 RCT-30	1.1005905	0.8970306	1.0381746	0.9933225	0.984823	0.8835008	1.0762517	0.8973588	0.7425278	1.9520089	0.8645484	0.63904643	0.6811359
Hepatocyte growth factor receptor	1.2638749	1.027575	1.063001	1.101021	1.0715936	1.0460532	0.9834322	1.2400773	1.0362331	1.3225686	0.8381368	0.7552504	0.8382074
MAP kinase kinase	0.78093766	0.8888761	0.97506094	1.0751804	1.077727	0.96799034	0.9258604	0.9680808	1.1647916	0.88721045	1.0518181	1.0871337	1.099124
Sodium/glucose cotransporter 1	0.7618419	0.8688772	0.9268219	1.1537853	1.2025312	1.3074665	1.2528331	0.9681726	1.176236	0.88427065	1.2090348	1.4381496	1.61234
Phase-1 RCT-27	1.8538898	0.574138	0.9800555	0.5884441	1.0851732	1.04085	1.1780117	0.4321448	1.0367874	0.8878195	1.7838923	0.8738466	0.85348787
Phase-1 RCT-50	1.1080082	0.9425652	0.9800424	1.0237849	0.925345	0.83158004	0.9610024	0.8530007	0.1690044	0.7938151	0.7411157	0.6185437	0.85348787
Phase-1 RCT-192	1.0873399	0.9880338	0.99737316	0.9433329	0.923407	1.3487914	1.0871835	1.7687748	1.3598887	1.3810881	1.0894567	1.2840046	1.1900749
Phase-1 RCT-288	0.8286943	1.1756977	1.0710568	1.114428	1.1401707	1.0990577	1.084748	1.7829393	1.7077834	1.1970165	0.9719302	1.289207	1.2300128
Phase-1 RCT-37	0.8676818	1.0680957	1.0543005	1.028688	1.0892788	1.2211272	1.104748	1.2469475	1.2070819	1.1970165	0.9719302	1.289207	1.2300128
Organic cation transporter 3	0.85970926	1.0366878	0.99726895	1.0313098	1.0468721	1.30762	1.136356	1.4518244	1.5176236	1.3338286	0.87377705	1.174476	0.8655044
60S ribosomal protein L6	0.8010806	1.0183214	1.0190082	1.0313098	1.0468721	1.30762	1.136356	1.4518244	1.5176236	1.3338286	0.87377705	1.174476	0.8655044
Zinc finger protein	1.0777481	0.9372628	0.9321073	0.9492872	0.9533503	0.8653567	0.92881405	1.126794	1.158219	0.8886028	0.9924435	1.2370325	0.8655044
Calgranulin B2	0.9000973	0.94948316	1.117017	1.0688834	1.0453684	0.8653195	1.0811646	0.9245816	0.8960258	0.95864993	0.9671858	0.73436084	0.82474478
Phase-1 RCT-92	0.9758971	0.9046503	0.9835015	0.98671206	0.8777909	1.3820323	1.0471778	0.93353508	1.052181	0.9264293	1.0130925	0.6746887	1
Phase-1 RCT-115	1.0986616	0.99857445	1.0963345	1.0367155	1.038991	0.9544834	1.0586688	1.492439	0.7183864	1.3840438	0.85604423	0.8628525	0.7190817
Matrin F/G	1.2633303	1.4045409	1.1659637	1.4520997	1.3897863	1.318737	1.3312683	1.2212411	1.0614078	1.368672	1.1184754	1.2997053	1.1500682
MLL homologue (MLH1)	1.0673726	0.9772407	0.9383864	0.9720207	0.8808076	1.1118248	0.99492308	1.0751213	0.922804	1.1588117	0.9830658	0.93588394	0.9087836
Phase-1 RCT-79	0.9407208	0.99142184	1.0724362	0.9839769	1.0803216	0.88801813	0.8878941	0.9875894	0.7370515	1.0138991	0.80701865	0.7550046	0.7181288
Sorbidin dehydrogenase	1.0185589	1.0466129	0.980248	0.997816	0.9484675	1.1340083	1.1589135	1.1517	1.3807027	1.0180518	0.8220114	0.9909119	1.1058229
Phase-1 RCT-24	1.3532889	1.1227802	1.2107719	1.1653223	1.1584629	1.4098384	1.1768937	1.8730942	1.4835359	1.840288	1.1625868	1.310083	1.0567348
Calgranulin B1	1.2607727	1.1037432	1.149822	1.018359	0.9281198	0.94204	1.115508	1.6576843	1.3162665	1.604489	0.86354595	0.8163858	0.9251354
Elongation factor-1 alpha	0.76193786	1.002233	0.97480043	1.1289371	1.0316497	1.2854718	1.0704509	0.995161	1.1032804	0.93632174	1.1765598	1.5463958	1.2081832
L-galactose-4-epimerase	1.3205411	1.0461835	0.9887675	0.6515527	0.6515527	0.6261718	0.9359877	0.6416021	0.6949168	0.7818444	1.015189	1.0640885	1.4301397
Phase-1 RCT-33	0.610948	0.98323667	1.0531303	0.8833054	0.820232	1.088969	0.92221445	0.7358658	0.5560834	0.834492	1.809142	1.3452349	1.2158774
C-Jun	1.2417426	0.9742847	1.0464569	0.89439645	1.6228351	1.0218707	1.070873	1.046865	0.7730989	1.0248736	0.9428843	0.7076349	0.92822963
Phase-1 RCT-233	0.9889171	0.84679846	1.0046378	0.8390657	1.121313	0.8777401	0.8043844	0.51658334	0.53044265	0.6981768	1.0081545	0.90811864	1.0282988
Phase-1 RCT-36	0.8600779	0.9551978	1.0055325	0.9150101	0.86873776	1.0515262	0.9250851	0.8849858	0.8386043	1.0073639	1.128538	1.1025287	0.9779161
Phase-1 RCT-242	1.0035763	1.0098862	1.0706884	1.0523593	1.1397182	0.9251136	0.9117706	0.9335592	0.64909996	1.0268097	0.9390978	0.63088373	0.78180763
Phase-1 RCT-181	1.2258081	0.9903194	1.077166	0.9549648	0.8813169	1.3537169	1.1235317	0.78118643	0.8886276	0.8017877	1.0274212	0.9818725	0.87331405
Phase-1 RCT-185	0.8708094	0.89331794	0.841216	0.8763624	0.9215216	0.8757807	0.8845327	0.57190675	0.5531281	0.5953927	1.2825836	1.1385449	1.1981014
Phase-1 RCT-179	0.83247066	0.94715593	1.0014976	1.0288103	1.0328587	0.9928803	0.9882638	1.14418	1.1672084	0.88938383	0.8808916	1.2638722	1.0751065
Phase-1 RCT-144	0.9032011	1.058249	1.034533	1.0436881	1.0203048	1.0055278	0.88246276	1.146836	1.240528	0.91690305	0.8648568	0.84371257	0.8762918
Phase-1 RCT-225	0.7720562	0.9407116	1.0043068	0.9471788	1.0527063	1.2305292	1.1220281	1.3058561	1.3024883	1.185149	1.4855889	1.6280132	1.3859823
IRB-A	1.4692731	0.80413955	1.2868481	1.2867189	1.2666693	0.8775507	1.1827702	0.9649061	0.9705965	0.9082298	0.9016574	0.8649855	0.8649855
60S ribosomal protein L6 (alternate clone 1)	0.81702286	1.0789739	1.0970656	1.0638716	1.1433125	1.2916285	1.1701252	1.4209286	1.687878	1.318884	1.0230248	1.2447221	0.993573
Beta-tubulin, class I	1.3948457	1.049039	1.1434577	0.8346446	1.2530004	1.5082289	1.1140807	1.7557883	1.8832543	1.4513957	1.0108775	1.2296692	0.8636096
Mitochondrial protein-2	0.9808773	0.9189236	0.8775058	1.1235701	1.0640013	1.3016158	1.1212188	0.8556285	1.6932912	0.8810166	0.7831205	0.84344906	0.82567056

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Phase-1 RCT-49	0.8343741	0.96536085	1.0347002	1.0472064	1.0431451	1.081106	0.9448738	1.1274874	1.1517112	1.1947484	0.9544208	0.7833854	0.80899125
Calgranulin B5	0.852246	1.0903741	1.0118438	1.0594568	1.0888842	1.1037564	1.0416651	1.2849755	1.3503848	1.2912887	0.9102316	0.8470503	0.8845488
NAAD-dependent isocitrate dehydrogenase, cytosolic	0.7823868	0.9417071	0.84153754	0.86674474	0.8771695	0.9477158	0.9172877	1.035538	1.1186335	1.042831	1.103822	1.2804332	1.087262
Oxalate binding protein 1	1.136942	0.9501961	1.0664714	0.7438418	0.8997783	0.9414327	0.97792006	1.091721	0.6191674	1.1426946	1.1303307	1.0054168	1.0136973
Sodium/bicarbonate cotransporter	0.8246252	0.83963504	0.7698405	0.9767895	1.0170171	1.1408238	1.0479002	0.74340034	0.9635514	0.5625144	1.0010197	1.6988712	1.4382459
Phase-1 RCT-174	0.81225145	0.95776806	1.0476176	0.9763269	1.1242897	1.2263923	1.0884602	0.8038409	0.8930653	0.6553982	1.277698	1.3716483	1.0907546
Phase-1 RCT-77	0.9441998	1.0348049	0.8276145	0.99313325	1.0025486	0.6813159	0.8502617	0.4417711	0.4308484	0.58972	1.1821638	1.6015104	1.7085139
Inositol triphosphate multikinase (pmk4)	1.2161734	1.0531038	1.1704457	0.89428374	0.96595983	0.9291541	1.1567845	1.2927977	0.7549474	1.313328	1.1051437	1.430769	1.3682747
Phase-1 RCT-265	0.83391685	1.0333087	1.048104	1.0332998	0.8811778	0.73441984	1.1271869	0.97346783	0.8694266	0.8087238	0.86240016	0.9937122	1.0826118
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	1.1470923	1.0721177	0.89904513	0.99018884	0.9857526	0.8885655	1.021909	0.97034297	0.93396246	1.0108408	1.1382835	1.2346054	1.2057886
CDK102	1.1580176	1.0585981	0.9829147	1.0190339	0.8310286	0.9801211	1.0531948	0.86346847	0.9800725	0.90103793	0.97710466	1.170525	1.2147553
Phase-1 RCT-209	1.0108911	0.9497801	0.8182326	0.9874237	0.78366857	1.2878464	0.87316227	0.6728621	0.7177974	0.7515808	1.4087878	1.1770525	1.2147553
NAADH-cytochrome b5 reductase	1.0586328	0.9682949	1.0967411	1.011337	1.0323993	1.0199403	1.034197	0.7403345	0.8332492	0.90224814	1.1083477	1.022748	1.1727281
Dynamin-1 (D100)	1.1247984	0.8957544	0.7545918	0.95135415	0.928715	0.77776897	1.0421358	1.1806708	1.3996538	1.308219	1.2435108	1.7119398	1.8992468
Sensory marker protein-30	1.1416126	0.8730109	1.0146686	0.9639989	0.8027262	0.9640189	0.9525853	0.84763914	0.729455	0.8917718	1.2136217	1.3255158	1.4303848
Phase-1 RCT-89	0.9778433	1.0278171	0.9645384	1.0178812	0.82824537	0.80165124	0.90330603	1.2265648	0.8351331	1.0914024	0.98093115	0.6807328	0.74948734
Camellia palmitoyl-CoA transferase	0.9595789	1.1619008	0.9270804	0.87470824	0.89684685	0.14514181	1.0677327	0.5597377	0.42628132	0.61538666	1.2188275	1.4350337	1.8096183
Alpha-2-microglobulin	0.7847085	1.053716	0.95748304	1.154201	1.01224	0.8177691	0.9126352	0.98999894	0.81018484	1.020589	1.3859916	0.9788674	1.3011009
Apolipoprotein CIII	0.99003754	1.0514872	0.9972921	1.091624	1.0340606	1.7347724	1.2783449	0.9436719	1.5763138	0.8682388	0.88160926	1.2463498	1.2331133
Cathepsin L, sequence 2	0.6722004	1.1509092	1.0478556	1.031411	1.1580485	2.3014224	1.1372776	4.738509	6.162734	4.8894225	0.9593192	0.762881	0.8912602
Phase-1 RCT-141	1.1866288	1.0324689	1.0728956	0.80391048	0.8521316	1.0134152	1.0429753	0.84858466	0.67115426	0.70188883	1.2333317	1.2304983	1.2174428
Endothelin-1	1.1555383	0.963924	0.9997654	0.98630475	0.81365895	1.0900887	0.9897185	1.0333135	1.2067653	0.9803304	0.9212896	0.7589734	0.8283772
Phase-1 RCT-282	0.9733658	0.9597745	0.8830304	0.92894767	0.8957024	0.90404695	0.8727823	0.93551236	1.0233729	1.2434165	0.8028874	0.5828946	0.68174195
Cylin D1	0.90724728	0.8989325	1.0319389	1.1836978	1.206082	1.0049003	0.8458683	0.74873865	0.68744457	0.76894208	0.8385972	1.1360551	1.5283848
Phase-1 RCT-287	0.7627775	1.1131109	0.92402957	0.94379616	0.93224235	0.9008286	0.9391691	0.9521175	1.2508853	1.0718463	1.0024188	1.2834116	1.2086746
Phase-1 RCT-281	0.85754406	0.9583422	0.87704678	0.9343561	0.965483	0.9409386	0.88749077	1.1442095	1.0101048	1.0179051	1.3902214	1.4682273	1.1698915
Retinol-binding protein (RBP)	1.7188332	0.8732487	0.78611164	0.81735	0.9830734	0.91125536	1.0621008	0.9493017	1.39509	0.8095881	1.1312388	1.7710817	1.7710817
ATP-stimulated glucocorticoid-receptor translocation promoter (GyK)	1.2187892	0.9355874	0.9807181	0.8155144	0.9875775	0.85916495	1.2512126	1.3437233	1.5160018	1.4085876	0.82778525	1.0043539	1.3212838
Phase-1 RCT-60	0.9681628	0.8628763	0.9574742	0.9610542	1.0850699	1.0889122	0.8495292	1.0776445	1.1897027	0.8335712	1.0055622	0.98275715	0.9893145
Pyruvate kinase, muscle	1.445187	1.0758014	1.421782	0.9761035	1.051382	1.1523137	1.1012504	0.8556803	0.6958784	0.9434177	0.9549041	1.176661	0.8058371
PAR Interacting protein	0.8152545	0.9857943	0.9853088	1.0780696	1.0077885	0.9724114	0.9821708	1.04938	1.1340228	0.9683348	0.9700523	0.956818	0.9813302
Nucleoside diphosphate Kinase beta isoform	0.90629834	1.0158951	0.99783033	0.9448464	0.86050084	1.1630942	1.0625386	1.526773	1.765416	1.5130631	1.2227219	1.4191723	1.2128245
Gadd153	1.1022518	0.801045	0.9566821	0.88084676	0.97674218	1.0279391	0.9810714	1.2014396	2.4945552	1.0471916	0.76800068	0.7511739	0.828822
Insulin-like growth factor binding protein 1	0.7408934	1.0325334	1.0366331	1.1922898	1.2286586	1.3332133	1.4302044	1.0328858	1.0168333	0.9434177	0.9549041	1.176661	0.8058371
C-H-Ras	0.8517048	0.9857929	1.0366333	1.07764	0.95597894	1.3565871	1.0802723	0.82434204	1.1187163	1.0524377	0.82278524	0.8465126	0.84686785
N-hydroxy-2-acetylaminofluorene sulfoxidase (ST1C1)	0.8782067	0.971423	1.0283146	1.0128206	0.8503795	0.8689189	1.127404	0.64578414	0.79618734	0.87898786	0.8737829	1.2065144	1.1840572
Phase-1 RCT-52	1.0074973	1.0132383	0.7427139	0.9157373	0.973811	1.4581005	0.92905873	0.7153038	0.80819887	0.5895132	1.1309578	1.1915534	1.1089556
Alpha 1 - inhibitor III	0.773895	1.0781608	0.85472155	1.1450712	1.182705	1.0094987	0.9528481	0.37201855	0.37341997	0.5830388	1.1347869	1.514807	1.1658853
Steal carrier protein 2	0.7572592	1.0532804	0.967309	0.90754837	0.88157004	0.7552584	0.8789012	1.1987628	1.097277	1.2810102	1.1692623	1.2216786	1.0921084
Organic anion transporter 3	1.2891245	0.8078735	1.0143822	1.1660897	0.9028798	1.3421004	1.2897395	0.8302369	0.41503394	0.8239205	0.79484707	0.98775003	1.1712021
Calgranulin B4	1.0884516	0.8979067	0.78976107	0.7506299	0.85414	0.7565825	0.8741541	1.293367	0.80923584	1.0804389	0.807943	1.2869326	0.8001259
Phase-1 RCT-182	0.7872895	0.985071	0.9217381	1.0233693	0.9017974	0.9419978	1.0357832	0.83652478	0.76337425	0.5875388	1.2729136	1.2817236	1.173113
Calgranulin B8	1.0614511	1.2112892	1.0974019	1.177785	1.1120715	1.4418879	1.0340444	0.9610461	0.6651959	0.57239705	1.2622958	1.3245763	1.2139002
Aldehyde dehydrogenase, microsomal	0.8360473	1.197637	1.0178883	1.0551094	1.1900282	0.8592732	0.88378277	0.68307453	0.7681101	0.8585815	1.0377968	1.3795788	1.2952984
Phase-1 RCT-128	0.8805222	0.9075656	1.0571285	0.9793593	1.0480365	1.0452617	1.0104522	0.6856925	0.41010805	0.90647805	1.151074	1.294693	1.2952984
Phase-1 RCT-102	1.9138232	0.9119279	0.967006	0.74424034	0.8762455	0.8647314	0.83925095	0.40094045	0.3898213	0.37785323	1.1315098	0.8204509	1.0402228
Preproalbumin, sequence 2	0.8227484	0.73791575	0.7431225	0.8757465	0.808523	0.8451376	0.8546395	0.98613176	0.53018464	0.45034432	1.2856698	1.571755	1.6298151
Apolipoprotein AII	1.1577284	1.3144972	1.2855222	1.0883684	0.7834002	1.177699	0.922714	1.4181116	0.388478	0.2153676	0.902758	1.046238	1.2600541
Phase-1 RCT-10	0.80960294	1.029465	0.89328235	0.98997833	0.89981471	1.0133904	0.97922117	0.7189327	0.7786887	1.0216087	1.0780687	1.4088161	1.3875399
Phase-1 RCT-48	1.317018	1.085884	1.1481524	1.0485578	1.0813711	0.7878428	0.9163891	0.8333745	0.6866043	0.83187528	1.0363316	1.1058678	1.0457726
Phase-1 RCT-8	0.8083772	0.7656643	0.7656512	0.6816856	1.0177617	0.71101815	0.88763266	0.4043152	0.5704519	0.52874684	1.3043152	1.5335654	1.6965154

Phase-1 RCT-168	0.9874058	1.0890715	0.8924605	0.95278835	0.9485305	0.85543555	1.0753123	1.2393059	1.0547988	1.073896	1.255812	1.2044877
Phase-1 RCT-48	0.9948443	0.85345215	1.0048211	0.7230025	0.7174807	0.8775012	0.8042633	0.4220284	0.986335	0.47018245	0.9094635	1.0359122
Beta-alanine synthase	1.8064681	1.3307033	1.273631	0.9084508	0.8513355	1.4501706	1.3506873	0.94128007	0.8866022	1.015452	0.9856528	1.0597227
Phase-1 RCT-296	0.9224703	0.9902157	0.7501596	0.9114901	0.71358784	1.124458	1.0836494	0.18624211	0.42324678	0.3878468	1.1289173	1.4011158
Carbonic anhydrase III	0.8057871	0.9288065	0.7189903	0.9923818	0.85021404	0.3300868	0.17868751	0.21075603	0.26353244	0.4604737	0.9381163	0.93755704
Phase-1 RCT-291	1.0158128	1.065928	1.038503	1.039503	0.9923818	0.85021404	0.3300868	0.17868751	0.21075603	0.4604737	0.9381163	0.93755704
Carbonic anhydrase III, sequence 2	0.78814745	0.94013023	0.8933563	0.98242164	0.60878044	0.6637146	0.8360448	0.83737923	0.32035166	0.4545226	0.8404232	0.8504268
Phase-1 RCT-271	0.9415461	0.94013023	0.8933563	0.98242164	0.60878044	0.6637146	0.8360448	0.83737923	0.32035166	0.4545226	0.8404232	0.8504268
HMG-CoA synthase, mitochondrial	0.8809846	1.1245083	1.286756	1.384652	1.286756	0.9059913	1.1732894	0.12239169	0.6637315	1.2028904	0.68468016	0.89283754
Phase-1 RCT-40	1.0231894	1.0282481	1.1416671	1.1672821	1.1384894	0.9169888	0.9896981	0.1742962	0.8253528	0.7740885	1.0181948	1.4367621
Urinary protein 2 precursor	0.7769733	0.9832317	0.9504287	0.8612702	0.92068336	0.9118621	0.966507	0.98301244	0.820356	0.5497607	1.1887506	1.5752737
Paraoxonase 1	0.8252485	0.93562317	0.8294287	0.8612702	0.92068336	0.9118621	0.966507	0.98301244	0.820356	0.5497607	1.1887506	1.5752737
Phase-1 RCT-189	0.90376556	0.93398064	0.8956168	0.7847021	0.92068336	0.9118621	0.966507	0.98301244	0.820356	0.5497607	1.1887506	1.5752737
Phase-1 RCT-38	0.940453	1.0134888	0.99712616	1.033928	0.91122651	1.230444	1.056478	1.0234121	0.3055242	0.7016244	1.3059711	1.1632563
Phase-1 RCT-270	0.8059044	1.2125023	0.95947254	1.520084	0.9179424	1.014571	1.230444	1.056478	1.0234121	0.3055242	0.7016244	1.3059711
Transferrin	1.2816015	1.1007507	1.1689194	0.9202878	1.0179424	1.014571	1.230444	1.056478	1.0234121	0.3055242	0.7016244	1.3059711
Hepatic lipase	1.15377	1.0283291	0.93363566	1.0707767	0.9578435	1.043723	1.075502	0.8315368	0.82826114	0.90066135	1.0713948	1.1339331
Cytochrome P450 11A1	1.1103174	1.1098975	0.9527204	1.0707767	0.9578435	1.043723	1.075502	0.8315368	0.82826114	0.90066135	1.0713948	1.1339331
Phase-1 RCT-175	1.430345	1.2542578	0.971414	1.0078024	0.936773	0.98013945	0.9891706	0.9406454	1.04898	0.9823534	0.9824816	1.2880542
Phase-1 RCT-137	0.853945	0.9971414	1.0078024	0.936773	0.98013945	0.9891706	0.9406454	1.04898	0.9823534	0.9824816	1.2880542	1.450947
Melanoma-associated antigen ME491	0.86847866	0.9450409	0.9030114	1.020777	0.8494096	1.1832627	1.3207452	1.008568	1.5208848	1.45077	0.978908	0.9057887
Phase-1 RCT-12	1.2095588	0.8495573	0.9257831	0.9377851	1.0292154	1.104016	0.80757394	1.4163115	1.0893043	1.2443941	0.9782024	0.8664395
Phase-1 RCT-152	0.77647064	0.982155	1.1383021	1.0854201	1.0839046	1.4144182	1.1633762	1.8298889	1.3071555	1.399048	0.9589547	1.1220873
14-3-3 zeta	1.0846046	1.0217621	0.9547824	1.0854201	1.0839046	1.4144182	1.1633762	1.8298889	1.3071555	1.399048	0.9589547	1.1220873
Cytochrome P450 2C23	0.8857345	1.0592669	0.97139144	0.867928	0.9895011	1.5887918	0.9656294	0.33988202	0.1542706	0.39495653	1.532878	1.9866357
Voltage-dependent anion channel 2 (Vdac2)	1.0642884	1.1340121	1.0680952	1.180123	1.1801408	1.1836747	1.1058954	1.3598763	1.2013805	1.2616247	0.0351424	1.128038
Phase-1 RCT-154	1.0284287	1.047096	1.0404276	0.9925371	1.0093783	1.045577	1.00823	1.0486311	1.2833568	1.3672818	0.9322451	0.8504946
Superoxide dismutase Mn	1.153363	1.0530064	0.9715418	1.09284	1.1650927	1.3349029	1.1091882	2.3164695	2.6711468	2.7240653	1.0801138	1.1802138
C-myc	0.92383375	1.0265818	1.045165	0.94813126	1.145606	0.9877814	0.86624327	1.047882	0.8681479	0.781741	0.7705437	0.7202864
Phase-1 RCT-196	1.1495323	0.930393	0.881665	0.9096665	0.9256703	0.752358	1.0116875	0.98478655	1.0208223	0.90740097	1.0938792	1.2392317
Cyclin G	1.1285464	0.989988	1.0409845	1.0224708	0.918238	1.0224708	0.918238	1.0224708	0.918238	1.0224708	0.918238	1.0224708
Calgranulin B5	1.020804	1.0184662	1.0833421	1.0571424	1.0266337	1.1449567	1.0224708	0.918238	1.0224708	0.918238	1.0224708	1.0224708
p53	0.97080374	0.84278015	0.941774	0.9704472	1.0204778	0.9848071	1.0112285	1.0022384	1.027117	1.0319926	1.089789	0.85842365
Phase-1 RCT-205	0.9223324	0.9740806	0.9603548	0.805594	0.93257433	0.8851988	1.0022384	1.027117	1.0319926	1.089789	0.85842365	0.858757
Phase-1 RCT-68	1.1217321	0.9523327	0.9485471	0.98109857	1.0069284	0.8937842	0.8805892	1.3280482	1.3968637	1.458852	0.9161487	0.8204522
Caspase 3	0.96516263	0.9747883	1.1163747	1.0938884	0.928473	1.1858555	1.1440717	0.90881805	0.87231225	1.0555503	0.7896991	0.5354997
Alpha-tubulin	0.8813765	1.0164001	1.0374818	1.1216313	1.0327415	1.2045397	1.0906062	1.7048915	1.4188843	1.6189833	1.3117191	1.5902787
Ribosomal protein L13A	1.057748	0.965749	1.0644748	1.0300075	1.2078028	1.4087431	1.2567678	1.5797532	1.4674202	1.3034056	1.1069448	1.334508
IgE binding protein	1.03284	0.9438508	1.003461	1.075561	1.0368315	0.84558658	0.9702258	1.2521025	0.93973	1.2001454	0.9965314	0.85148956
Cofilin	0.910445	0.8537863	0.8462809	1.0517478	1.0217646	0.8435281	0.9882948	2.7488493	3.3077483	1.2739243	0.83040204	0.80515224
Heme oxygenase	0.85401804	0.8055482	0.883434	0.79821795	1.1525307	0.9581945	0.7271075	2.5563145	2.7688493	2.0662865	0.8500333	0.7552453
Phase-1 RCT-241	0.94594383	0.9572519	0.8835588	0.9088485	0.87601197	0.87601197	0.87601197	0.87601197	0.87601197	0.87601197	0.87601197	0.87601197
Ribosomal protein S9	0.88096053	1.0499238	0.9388867	0.9365588	0.95228573	1.325914	1.333934	0.8619822	1.0480029	1.0035751	1.2591383	1.1633281
Phase-1 RCT-258	1.0237927	0.9904916	0.87291523	1.0457307	0.9053249	1.325914	1.333934	0.8619822	1.0480029	1.0035751	1.2591383	1.1633281
Angiotensinogenase I	1.0434597	1.230507	1.098382	1.2855361	1.2318297	1.95606	1.1187153	0.7539984	1.4817644	1.6033653	1.1617475	1.1483281
Phase-1 RCT-180	0.87509686	1.1214033	0.957489	0.9148304	0.8767878	0.95894476	1.1083627	1.2298504	1.4817644	1.6033653	1.1617475	1.1483281
Mutidrug resistant protein-1	0.8455738	0.80356574	1.0856668	0.8282014	0.97534186	1.1417308	1.0683627	1.9152856	1.424878	0.8177186	0.7854111	0.8676729
Thymidine decarboxylase	1.3415717	0.9827797	0.93766524	1.095561	1.060935	1.0942605	1.0808917	1.2346163	1.4650202	0.9154282	0.62356548	0.71728504
Oritin beta-10	0.9116678	1.0686759	1.070773	0.9657293	1.0829132	1.3850141	1.1612659	1.8280458	2.3784608	1.7165195	1.2220308	1.305303
Thymosin beta-10	1.099171	0.9987163	1.1004073	1.070418	1.0819689	0.99372245	1.1612659	1.8280458	2.3784608	1.7165195	1.2220308	1.305303
Phase-1 RCT-72	1.099171	0.9987163	1.1004073	1.070418	1.0819689	0.99372245	1.1612659	1.8280458	2.3784608	1.7165195	1.2220308	1.305303
Phase-1 RCT-109	0.8903390	0.97328395	0.8867746	0.95887333	1.0123172	0.9206866	0.8881139	1.2759122	0.98749804	1.208458	1.1228975	0.8647801
Phase-1 RCT-76	0.77263206	0.93145746	0.8785046	1.0005101	1.1441445	0.88457227	0.8028939	0.8328071	1.190974	0.8946488	1.3589582	0.8423752
Vacuole membrane protein 1												1.4535501

Phase-1 RCT-158	1.0069507	0.9804196	0.9507273	0.9558102	0.9311365	0.9755653	0.9802613	1.0711039	1.3011131	0.9597124	0.89449936	0.62580654	0.7822657
Phase-1 RCT-113	0.8185781	0.96035874	0.9035147	0.9654516	0.9891713	0.9768633	0.9283045	1.397883	1.6157112	1.3207585	0.9729081	0.8117804	0.8629102
Endogenous retroviral sequence, 5' and 3'	1.1070669	0.9789911	1.1128078	1.1103172	0.8919403	0.53027105	1.2164467	1.4974666	0.7859484	0.9622971	0.7465968	0.79731405	0.92915183
LTR	0.72711504	1.261218	1.1297102	1.3523881	1.4099844	1.2310386	1.0602597	1.8834116	1.61845	1.8085961	0.7375403	0.8083423	0.7488789
Beta-actin	1.3850147	1.0807959	1.033921	1.1916884	1.2472743	1.0737641	0.9905068	1.1218907	1.0545754	0.9897072	0.7868141	0.6928104	0.9345931
Phase-1 RCT-65	1.2248117	1.0487486	1.160248	1.123869	1.1468264	0.9936944	1.1657886	1.3615812	1.6303443	1.2259327	0.8309881	0.8013304	0.96461847
MHC class I antigen RT1.A1(0) alpha-chain	1.1708462	0.9168594	0.9538538	1.0041071	1.0121685	1.0483627	0.9530555	0.8581607	1.7328737	0.7866875	0.98007386	0.93821704	0.77865083
Bax (alpha)	1.080439	0.9830242	0.96168107	0.9803597	0.86865103	0.97937465	0.9539153	1.7758193	1.1930655	0.85135336	0.8673934	0.8795255	0.7894532
Carbonyl reductase	0.9796327	1.05739	1.0134748	1.0863146	1.1789522	1.1285318	0.9446795	2.5385015	1.637214	2.4577072	1.0022544	1.1652049	1.0062885
Beta-actin sequence 2	1.1594772	0.82338434	0.86486125	0.92874706	0.8429848	0.96120435	0.9129081	0.99418116	1.892138	0.8058113	0.85183823	0.81505436	0.74316373
Interleukin-10	1.1965028	1.1272738	1.1577923	1.1821475	1.186199	1.1166553	1.1671387	0.8985956	1.2611688	0.90905617	0.916745	0.80753434	0.4337102
Phase-1 RCT-191	0.89211863	0.967234	0.908333	0.99806225	1.0582118	1.0028301	0.91705245	1.2543318	0.92628413	1.1213398	1.0907009	1.0940389	1.1461548
Phase-1 RCT-111	0.87599598	1.0212651	0.9301628	0.81223226	0.8810531	0.8355481	0.9171519	1.0168957	0.8268884	1.2212721	1.1711509	1.347449	
Apoptosis-regulating basic protein	1.0575132	0.84334775	1.1938931	1.2281624	1.1204993	0.95975504	0.8719681	0.80290015	0.483344	0.5317811	1.5928957	2.0725956	
Glutathione peroxidase	1.0390319	1.0439553	1.0084693	1.0854166	1.1205165	1.2072555	0.948328	0.49412522	0.91081568	0.74432883	0.8150289	0.8480604	0.8509328
Phase-1 RCT-67	0.9604351	1.0520599	0.9168299	1.0184387	0.9158499	0.94983596	0.95327013	0.8719681	0.877724	0.8743017	0.8172646	0.8480604	0.8509328
Tryptophan hydroxylase	1.2830923	1.0167673	0.84384553	0.92346378	0.87934567	0.7117351	1.0833777	0.4453314	0.42034262	0.43964502	0.7885713	0.85938683	1.3075212
Sulfolipase K2	1.0693469	1.0744168	1.1281583	1.09247	1.0712606	1.2503414	0.966543	0.83065873	0.7887797	0.9522204	0.9629836	0.69934726	0.8977183
Calgranulin B9	1.0657610	0.98640083	1.0448872	0.88120115	0.9529057	0.9081538	0.9505437	0.83065873	0.04801503	0.7598676	0.9460847	1.1078945	0.8908866
Phase-1 RCT-48	1.1870042	0.98588586	1.0007584	0.9343267	1.011878	0.8857775	0.9329474	0.7310531	0.98145854	0.8598504	0.857393	0.88524754	0.77075803
Aquaporin-3 (AQP3)	1.0490884	0.95271137	1.012697	0.92840874	0.95037514	0.86953455	0.9509563	0.97879367	0.05174578	0.2249203	1.356951	1.3984963	0.4242189
Stearoyl-CoA desaturase, liver	0.39296388	0.5551645	2.3170536	0.6518478	1.894991	0.7837848	0.9207206	0.3077842	0.05174578	0.2249203	1.356951	1.3984963	0.4242189
Phase-1 RCT-84	0.92618088	1.0138769	0.8780846	0.95526135	0.96639115	1.0959152	0.8531609	0.8280067	0.7236261	0.7335034	1.019528	0.85589555	0.71806085
(1) Gene expression data for 24 hour timepoint are presented as mean ratio of treatment/control for all 24 hour predictive genes (Table 5).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound-dose group at 72 hr: yes-necr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 5 and as included in Table 26)													

Table 29

Table 29. Expression Data for 24 Hour Timepoint (1)													
Compound-Dose (2)	CIS 10	CIS 10	CIS 10	ANIT 60	ANIT 60	ANIT 60	BRB 200	BRB 200	BRB 200	BRB 200	BRB 200	BRB 200	BRB 200
Animal Number (3)	334	335	336	1654	1655	1656	2346	2347	2348	2349	2350	2351	2352
Liver Toxicity Inflammation Classification (4)	no	no	no	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both
Gene Name (5)													
Gamma-actin, cytoplasmic	0.82724625	0.5751058	0.67052247	2.8152804	2.7005335	2.783659	6.3413463	2.582591	6.828484	4.1591353	3.7512927	3.3873024	2.8595161
Phase-1 RCT-145	0.98323213	1.0810103	0.97031736	1.4117402	1.32557	1.37849	1.6184184	1.103763	2.234593	2.7501873	1.8462271	1.7534618	1.7534618
Gadd45	1.319409	1.3900798	1.0893645	2.088888	1.8500634	1.9602532	3.8164873	0.4207078	3.217715	3.1520169	4.261273	2.9655323	2.030087
Phase-1 RCT-78	0.80739146	0.80461675	0.9871855	0.69513206	0.8470088	0.7892923	0.53518	0.7712095	0.8521541	0.5750227	0.8621033	0.6821078	0.5578156
Fas antigen	0.72530997	1.0026166	1.2617052	1.2812631	1.122157	0.918995	0.918995	0.918995	1.1902138	1.1902138	0.939885	1.0050316	2.1579413
Macrophage inflammatory protein-2 alpha	4.758482	1.797091	2.160028	2.5375724	2.5458278	2.8080688	1.2480948	4.425348	1.2480948	1.2480948	1.2480948	1.2480948	1.2480948
Integrin beta1	0.9165761	0.80133665	0.8958817	1.7162081	2.1971838	1.8882483	1.4571174	0.9048634	1.4271086	3.262077	3.9892285	1.0057835	3.927502
Phase-1 RCT-207	1.7326708	1.7344229	1.5800321	1.681586	1.3895581	1.3459651	2.037197	1.0707659	3.252176	0.6819975	0.70681936	0.6832677	0.82234126
Aspartate aminotransferase, mitochondrial	0.678668	0.8864292	1.1101393	0.855814	0.8053435	0.8680167	0.8782228	0.8264757	0.8782228	0.8782228	0.8782228	0.8782228	0.8782228
Caspase-1 alpha	1.5165948	1.2230343	0.829141	0.921519	0.8614838	1.0226146	0.7309603	0.7436712	0.8938994	0.8873565	0.9517914	0.9777899	1.01981727
Malic enzyme	1.1466739	0.7798951	0.71374005	0.7590175	0.98380524	0.82379186	0.71057266	0.8782228	1.0029058	0.9089318	0.9320057	1.0373375	0.93841608
Phase-1 RCT-30	1.1363116	0.8577605	1.1108592	0.8570477	0.8314422	0.99544305	0.7163424	0.7268016	1.0029058	0.9089318	0.9320057	1.0373375	0.93841608
Hepatocyte growth factor receptor	1.3883113	1.134005	1.276314	1.264822	1.3217827	1.2435211	0.78024155	0.7471187	0.9024427	1.1160478	1.319589	1.2237318	1.5831045
MAP kinase kinase	0.9004822	0.7758338	0.7947748	1.0744748	1.1940894	1.1272953	1.2697535	1.1657861	1.0921427	1.1160478	1.319589	1.2237318	1.5831045
Sodium/glucose cotransporter 1	1.0746789	0.7627008	1.7060462	0.6792983	0.5084593	0.949501	1.1770885	1.1405883	1.0587756	0.94781333	1.0942548	0.8082068	1.1837766
Phase-1 RCT-57	0.44558394	0.58865	0.7981597	0.5182551	0.48960972	1.2967733	1.3520487	1.4277927	1.5294025	0.5882016	1.5083017	1.934143	0.6958406
Phase-1 RCT-60	1.3159583	1.037804	0.8177524	1.5586743	2.7248265	1.8580739	0.8449889	3.9774773	2.437746	2.3577508	1.703701	1.7924331	
Phase-1 RCT-182	1.1504003	1.0868511	1.3035669	1.1743883	0.8589591	1.0033683	1.3084614	1.2500607	1.696408	1.830081	1.859958	1.453305	2.7869356
Phase-1 RCT-288	0.57971936	0.5864734	0.8905542	0.40367845	0.48828462	0.45742106	0.3955931	1.013478	0.98011812	0.35105284	0.39148474	0.40384814	0.4221105
Organic cation transporter 3	0.96289814	0.9381509	0.92557613	1.3428649	1.183368	1.3100312	1.2409188	0.9572428	1.2238449	1.838006	1.7346933	1.5131768	2.7272723
60S ribosomal protein L6	0.8732908	1.0270381	0.9957632	1.3241475	1.789474	1.3818914	2.082782	1.6285863	1.941105	2.268544	2.1275542	1.6857665	2.9744898
Zinc finger protein	0.8822273	1.1477885	1.0847522	2.4483747	2.337706	2.870814	0.86595378	5.728336	3.35518	2.1527803	2.0758442	1.6987394	2.680862
Calgranulin B2	1.05289	0.91715175	1.0483787	0.78372014	0.8935028	0.837615	0.837615	1.0215933	0.955221	1.2215008	1.1755846	1.0518434	2.680862
ID-1	1.0556043	1.1348583	1.117049	1.8451518	1.6511902	1.7284788	1.899624	1.2480067	1.7147872	1.4837141	1.3515973	1.493595	1.747959
Phase-1 RCT-92	0.73558768	0.708897	1.3046607	0.46910748	0.3674097	0.5628777	0.5270888	1.0341121	0.48971674	0.47609863	0.8497421	0.7002124	0.3006593
Phase-1 RCT-115	1.4457804	1.4248437	0.92141503	1.3287489	1.6963397	1.1894824	0.8159624	0.717528	0.9780338	0.4314714	0.42854224	0.6078947	0.5748441
Marlin F/G	1.2457743	1.2053122	0.96242108	0.88921053	0.668238	0.57440174	0.65455997	0.8086663	0.6347631	0.4314714	0.42854224	0.6078947	0.5748441
Multi. homologue (MLH1)	1.3327518	1.1592891	1.4195013	1.0161028	1.091539	1.0201291	0.8951369	0.8342756	0.9551917	1.4689319	1.3104577	1.5085807	1.936048
Phase-1 RCT-78	1.0160297	0.76590876	0.84906118	1.0154307	1.180395	1.1377597	0.9894416	1.0802329	0.9551917	1.4689319	1.3104577	1.5085807	1.936048
Sorbitol dehydrogenase	1.4122272	1.4245683	1.1174327	0.81675893	0.6505288	0.7285615	1.0294648	0.8342756	0.9551917	1.4689319	1.3104577	1.5085807	1.936048
Phase-1 RCT-24	0.611354	0.63810494	0.8955221	1.2896356	1.3844216	1.222949	1.9458537	1.4901353	2.4472191	2.4256164	2.4015794	2.3283994	2.9543788
Calgranulin B1	1.0161464	0.78419423	0.94898456	0.9838174	0.968937	1.1949037	0.87388988	1.0632242	0.9602715	1.2659063	1.3837451	1.0221102	1.501548
Calgranulin factor-1 alpha	0.8224857	0.8013723	1.793574	1.0457118	0.84095335	0.93035835	2.0641768	1.277828	1.769846	2.2146778	2.0406655	1.6377442	2.9945145
L-gulonolactone oxidase	0.39338544	0.39400756	0.6067522	0.3178154	0.3028709	0.4732975	0.2873403	0.72025126	0.20965223	0.30381003	0.32599437	0.35245144	0.28735882
Phase-1 RCT-33	0.55566293	0.59995134	0.61284256	0.5376451	0.47198238	0.55167465	0.42701985	0.3747322	0.45002155	0.89758654	0.56327516	0.5756864	0.48241082
C-Jun	1.8328888	3.097618	1.2180735	4.1824727	6.8412016	2.478183	1.81839	1.494286	2.2417455	1.1656922	1.7824228	1.683729	2.5113218
Phase-1 RCT-233	0.80128665	0.6078753	1.3382627	0.4188262	0.47808117	0.42352288	0.7440132	1.037369	0.651865	0.7007074	0.6315164	0.7024854	0.37081705
Phase-1 RCT-38	0.8738113	0.8501622	0.73135525	0.72968105	0.7008768	0.77246898	0.72325546	0.70816394	0.83028054	0.8444883	0.73591244	0.7781704	0.63819146
Phase-1 RCT-242	1.0458608	1.8994325	0.95127898	2.1078826	3.7647943	2.0941517	0.83741196	0.81583845	1.6892388	1.250377	1.1579976	1.1252191	2.257814
Phase-1 RCT-181	0.91458007	0.9410005	0.8488927	0.8045125	0.8001847	0.8490373	0.8932194	0.99871664	0.8526776	0.98404217	0.8573403	0.8822259	0.5870315
Phase-1 RCT-185	0.5725222	0.6217701	1.1922091	0.9689654	0.8588951	1.0019088	1.0430289	1.2457815	0.8018344	0.47457785	0.52308416	0.4822259	0.5870315
Phase-1 RCT-179	0.73895875	0.76473	1.0310801	1.305246	0.99900594	1.0877058	2.2774741	1.9603219	3.243633	3.0924978	2.98777	2.1053884	2.8727083
Phase-1 RCT-144	0.85562935	0.87015766	0.84756837	1.258295	1.2501448	1.1887028	2.5236042	1.9767266	3.738733	3.0924978	2.98777	2.1053884	2.8727083
UG-a	0.86473733	0.8979037	1.2738705	1.2784844	0.9227232	1.1990693	2.5236042	1.9767266	3.738733	3.0924978	2.98777	2.1053884	2.8727083
Phase-1 RCT-225	1.1938857	0.8403325	0.70913663	1.021184	1.131828	1.3423305	0.5737628	1.4804069	6.0768406	5.606353	2.5713568	2.0740738	5.27724
60S ribosomal protein L6 (alternate clone 1)	1.2395573	1.0734788	1.0681065	1.2078928	1.0232292	1.2886127	2.9642246	2.14693	2.3583334	2.3956828	2.6032486	1.912428	2.881203
beta-tubulin, class I	0.8217132	0.8217132	1.047288	1.2549784	1.4095595	1.1703591	2.6876942	1.7822840	2.3386888	2.2925693	2.1714432	1.9644219	4.3570747
Mitochondrial protein-2	2.9246273	4.7353415	2.4812171	4.008009	3.757892	1.8614948	1.7608433	1.8566137	1.951584	1.9418001	1.4478699	3.4459193	

Table 29

Phase-1 RCT-49	1.1182084	0.9792716	0.8867833	0.87245187	1.035773	1	1.5863192	0.7475786	2.3540325	2.4778747	2.0622022	1.6578346	2.4883013
Calgranulin B3	1.1003022	1.1370479	0.8928941	1.50184	1.2385951	1.2331116	1.467347	1.0596248	1.3876842	2.020875	2.3159852	1.6054727	1.98844
NAAD-dependent isocitrate dehydrogenase, cytosolic	0.7524885	0.78037585	1.2077081	0.53553915	0.5181257	0.59741026	0.5045047	1.254477	0.74175125	0.9945583	0.8947122	0.94610473	
Oxannol binding protein 1	1.3134217	0.8211289	1.4582215	0.68122375	0.60714346	0.6210288	1.0400398	1.1157578	0.9110788	0.8717724	0.99048145	1.0848467	0.6805973
Sodium/bile acid cotransporter	0.47047058	0.59058941	1.4424578	0.60215557	0.50584453	0.504769	0.3977225	0.8805587	0.51537305	0.9742714	0.4255522	0.51129407	0.28780095
Phase-1 RCT-174	0.9664532	1.0937285	1.3871135	0.7177459	0.77869254	0.7639064	0.8841745	1.0574518	1.3206568	0.87360873	0.9023278	0.8614056	0.7262499
Phase-1 RCT-77	0.8301803	1.0917418	1.7078668	0.6251808	0.63231564	0.7639064	0.8841745	1.0574518	1.3206568	0.87360873	0.9023278	0.8614056	0.7262499
Inositol polyphosphate multikinase (Imk)	0.5931497	0.63649786	1.3715794	0.32751185	0.43681888	0.82328914	0.3003028	0.724578	0.43498387	0.35463157	0.4898983	0.35528378	0.20870742
Phase-1 RCT-258	0.8253275	0.5855819	1.117219	0.46388495	0.36595485	0.5427848	0.3659292	1.1538448	0.32813323	0.41955167	0.35055092	0.63824123	
Equilibrative ribonucleoside triphosphate-sensitive nucleoside transporter	0.7262129	0.67893296	0.97165626	0.35035287	0.52882596	0.43334824	0.6318314	1.0943241	0.3283659	0.3405506	0.4873865	0.37531725	0.31350487
CDK102	0.8621007	0.8295851	1.1030744	0.6858315	0.67849815	0.78348314	0.82130446	1.2718744	0.8015408	0.9884693	0.97662865	0.9824105	0.8625149
Phase-1 RCT-209	1.2057533	1.2456827	1.185327	0.7443172	0.731328	0.7546657	0.7844577	1.3984416	0.8111028	0.7057985	0.7050434	0.8159617	
NAAD-cytochrome b5 reductase	0.6676566	0.49780124	1.082288	0.5972813	0.56891495	0.58769425	0.687643	1.3945559	0.8214932	0.9214832	0.78215777	0.88108854	0.5210772
Dynactin-1 (D100)	0.8961323	0.8578891	1.1988286	0.6147045	0.57585586	0.46753195	0.80530628	0.7835024	0.8262976	0.72662566	0.7237473	0.765397	0.2729826
Senescence marker protein-30	0.35119078	0.42046997	0.97195846	0.25518194	0.52595073	0.4065526	0.23637104	0.88449024	0.17860238	0.1397427	0.16460176	0.14743891	0.20571841
Phase-1 RCT-59	0.5203278	0.6633486	0.9388178	0.6430527	0.6245479	0.7949564	0.44149335	1.1624897	0.1385886	0.45435837	0.46197036	0.7722805	0.4608808
Carbamate palmitoyl-CoA transferase	1.8895964	2.1012914	0.77543305	1.7609585	0.8531335	1.5787827	1.066745	0.8222608	1.120735	1.1555865	1.120735	1.3581136	0.26876524
Alpha-2-microglobulin	0.5910115	0.54483575	1.4181739	0.4604264	0.94219047	0.7017523	1.0436804	0.52861	0.50705678	0.8539102	0.81549777	0.10907748	
Apolipoprotein CIII	1.0711987	0.82422405	1.525113	0.81206334	0.712142	0.78302844	0.89576235	1.0876268	0.70069094	0.743817	0.6846948	0.70714283	0.3838603
Cathepsin L, sequence 2	1.48071463	1.6876973	1.4350459	1.7213274	1.6381568	2.283308	0.890137	1.5487506	2.3439303	3.4439734	2.803804	1.9413538	4.7689603
Phase-1 RCT-141	1.9543427	2.1604865	1.709181	2.3369281	2.9470577	3.0634582	1.7803478	1.0156726	1.4795526	1.1072306	0.95750386	0.8017688	1.2314003
Phase-1 RCT-289	0.5395202	0.581988	1.1524754	0.7675606	0.5714473	0.5785782	0.69220674	1.0586882	0.5900754	0.70885414	0.7281247	0.7573724	0.5913611
Endothelin-1	1.5004412	1.3089897	1.1086081	1.2859665	1.0892094	1.0565359	0.8907501	0.8709467	1.0019877	0.9525988	0.90931328	0.98721604	0.7728649
Phase-1 RCT-282	1.1136884	1.0339315	0.8278547	0.8470797	1.009086	1.0034198	0.98840954	1.073568413	1.0352458	1.2452167	1.0389752	0.93394643	
Phase-1 RCT-140	1.1169554	1.0511598	0.8402597	1.1127888	1.1242876	1.011963	0.83052	0.880253	0.8917811	1	0.88888165	1.0692425	1.0392525
Cyclin D1	0.9935063	0.68191048	0.7335393	0.92351407	0.8928187	1.0761143	1.1174494	0.86544216	0.6917542	0.7510088	0.7324122	0.628155	2.5870803
Phase-1 RCT-287	1.174107	1.177421	1.0090078	0.7709568	0.7810283	0.87767171	0.8528089	1.175182	0.7532035	0.92518243	0.90863614	0.886267	0.94824146
Phase-1 RCT-281	0.75021195	0.89730567	0.89213085	0.8628455	0.8672268	0.75114787	1.062211	1.230714	1.0685341	1.0683781	1.0683781	0.8188	0.91731733
Radical-binding protein (RBP)	0.8088548	1.0028935	1.593229	0.8148893	0.57373124	0.7132884	1.87878	1.649885	1.124187	1.5494004	1.3398812	1.6813	0.4144284
ATP-stimulated glucocorticoid-receptor translocation promoter (GR)	0.81455657	1.0149196	0.88365055	0.37233856	0.50895286	0.4642828	0.5450825	0.9718005	0.613031	0.67895246	0.8218783	0.7028068	0.8404624
Phase-1 RCT-60	0.8640484	0.888075	0.77254635	1.6288269	1.8332595	2.0561283	1.4588786	1.008503	2.05471	2.4060395	2.0210497	1.6777257	2.0340074
Pyruvate kinase, muscle	1.0308839	0.8119378	1.0635122	1.5084109	1.4707555	1.4259942	1.8135168	1.1696442	1.775378	0.894228	1.06112	0.9770695	3.638588
PAR interacting protein	0.8423728	0.92369246	0.8311345	1.3840002	1.2157574	1.1188193	2.294099	1.2070475	2.8892342	3.5541978	2.8892342	2.3367791	1.735508
Nucleoside diphosphate kinase beta isoform	1.252927	1.139818	1.7035264	1.0977099	1.248486	1.2140932	1.8620404	1.5043029	1.5408747	1.5864394	1.4057313	1.1744483	3.0686514
Gadd153	1.4060813	1.4889789	1.5081395	0.8947383	1.3535042	1.0169462	3.3716147	1.5048493	2.389214	2.0052053	2.3236132	1.4319441	3.5861987
Insulin-like growth factor binding protein 1	0.7644351	1.0143567	1.32057	1.8059208	2.2281928	2.491202	0.64358	1.353118	3.555229	2.3578340	2.3525052	1.6197916	2.908188
c-H-ras	1.1660878	0.9425293	1.2545226	1.5805224	1.3348685	1.3178317	1.3103396	1.3002611	1.3089608	1.2833016	1.242251	1.0674042	1.833201
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.2146459	0.4633918	0.90073943	0.20210876	0.50632894	0.38339978	0.2617291	0.9447864	0.19364727	0.24691275	0.3123144	0.1862834	0.19158725
Phase-1 RCT-52	0.25968948	0.30078533	0.71339565	0.63874376	0.7803692	0.8194473	0.46788185	0.87968206	0.28470257	0.27040897	0.3073088	0.31013358	0.5197132
Alpha 1 - inhibitor II	0.4164851	0.3011211	0.70792437	0.41671333	0.3835373	0.400532	0.5751843	0.7830475	0.35475832	0.47378162	0.41407878	0.3248223	0.22212233
Sterol carrier protein 2	0.74162906	0.7457044	1.345368	0.516745	0.6285137	0.6807319	0.62857934	0.33975356	0.5690988	0.76071554	0.76071554	0.76071554	0.5257251
Organic anion transporter 3	0.6531905	0.68398256	0.6307485	0.759185	0.64281665	0.46031368	0.5586534	0.8209532	0.6551391	0.67153054	0.5793031	0.5761443	0.6055328
Calgranulin B4	0.43492752	0.40555024	0.9692238	0.6798362	0.7879437	0.950311	0.41914585	0.7327386	0.3835465	0.348278	0.4672513	0.46689403	0.9332869
Phase-1 RCT-182	0.75378654	0.77546906	1.0924189	0.55212575	0.6272612	0.55798453	1.3480315	1.3003819	0.6879845	0.5041409	0.56002678	0.6572339	0.35878553
Calgranulin B8	0.87863507	0.81422808	0.9411978	0.58851874	0.5584183	0.5879893	0.89428845	1.2589341	0.7655959	0.55881294	0.5058089	0.7053089	0.4902847
Aldehyde dehydrogenase, microsomal	0.9708295	0.7869003	0.7817526	0.9086032	0.603242	0.9248651	0.60927828	1.0701761	0.6195232	0.7377977	0.721162	0.8002882	0.5509729
Phase-1 RCT-128	0.5201788	0.5982282	1.624991	0.40784308	0.45241985	0.33822552	0.8250362	1.3068187	0.585165	0.9359549	0.9002583	0.30948514	
Phase-1 RCT-102	0.24672818	0.30895128	0.6141785	0.30324045	0.4686673	0.24200566	0.48607826	0.741308917	0.38458078	0.36516868	0.45720705	0.32243782	
Preprolactin, sequence 2	0.56628174	0.5417234	1.1031971	0.58490517	0.52840793	0.64561707	0.8973844	1.1886702	0.6500595	0.8104288	0.94592716	0.3077183	
Apollipoprotein AII	0.27780518	0.2721711	0.70916295	0.1609181	1.6395122	0.7124378	0.32278322	0.680321	0.27625848	0.26337488	0.32505155	0.32614876	0.23988735
Phase-1 RCT-10	0.71665937	0.67093925	1.2089154	0.7165137	0.7418044	0.78527028	0.9269321	1.291772	0.680321	0.6783614	0.63458858	0.57033825	0.4317042
Phase-1 RCT-48	0.58659154	0.57914968	1.3059179	0.6044615	0.7098151	1.1764657	0.6369906	0.6176235	0.5369906	0.5625345	0.6329519	0.86030245	0.98030245
Phase-1 RCT-5	0.092162	0.5473289	1.1130717	0.59027046	0.53691375	0.666804	1.0729198	1.2563145	0.65739376	0.5570644	0.6824657	0.5989647	0.31238207

Table 29

Phase-1 RCT-168	0.98942603	0.61384875	0.780075	0.83954526	0.95003855	0.9666907	0.68250972	0.75085664	0.56848976	0.84724916	0.73338683	0.75185984	0.4996205
Phase-1 RCT-169	1.1227397	1.2653413	1.1939217	0.7571328	0.7798724	1.0261106	0.7127862	0.75085664	0.83972476	0.6534348	0.8179628	0.75185984	0.39520985
Beta-alanine synthase	0.6866589	0.762808	0.2024061	0.695500	0.7742554	0.5712801	0.4035312	1.047875	0.3752797	0.3052923	0.3473831	0.4245721	0.44687837
Phase-1 RCT-296	0.23103629	0.24507588	0.31087506	0.2773184	0.2773184	0.33678442	0.680221	0.27071857	0.38397388	0.2700433	0.26046717	0.22784016	
Carbonic anhydrase III	0.127679	0.2762675	1.1965943	0.4497268	0.557257	0.49651492	0.6804507	0.7362397	0.06721065	0.035056096	0.042823865	0.05255947	
Phase-1 RCT-291	0.93523055	0.960121	1.000228	1.6845252	0.51316696	0.41188188	0.87484345	0.6212821	2.1635914	0.6830983	0.7459604	0.7203081	0.658074
Carbonic anhydrase III, sequence 2	0.44631323	1.051266	0.61027616	0.5468598	0.46295536	0.3574906	0.9650761	0.32768246	0.30891539	0.86021877	0.70561206	0.8714866	0.44680075
HMG-CoA synthase, mitochondrial	2.339678	1.8755138	0.732957	0.90491895	0.5511306	0.74579227	0.806438	1.252334	0.4051631	0.3470025	0.5071123	0.4286003	0.67716044
Phase-1 RCT-169	0.800868	0.770252	1.080882	0.6307635	0.8485933	0.6801832	0.806438	0.97497004	0.551977	0.3470025	0.5071123	0.4286003	0.67716044
Phase-1 RCT-40	0.5244213	0.7598361	1.1957812	0.5076305	0.7872815	0.5956453	0.59641576	1.1619401	0.32925566	0.28797124	0.44501283	0.7595103	0.263981
Uridylate protein 2 precursor	0.456527	0.9231172	2.144793	0.42498216	0.52659024	0.5540678	0.42418185	1.1881533	0.29252566	0.53271846	0.5038561	0.5214765	0.24010412
Pantothenase 1	0.4450428	0.5490457	1.2321972	0.47113988	0.50816805	0.5347782	0.82349455	0.6589376	0.6589376	0.20579734	0.2683578	0.27074984	0.2655552
Levofatty acid binding protein	0.2922781	0.30979812	0.74774828	0.4685508	0.4626451	0.9700023	0.2113399	0.63992156	0.2431244	0.20579734	0.2683578	0.27074984	0.2655552
Presenilin-1	0.41509038	0.37258005	0.7263787	0.43922102	0.404816	0.4484522	0.5814131	0.9017057	0.3378932	0.4666128	0.4047977	0.332619	0.2488283
Phase-1 RCT-38	0.8243151	0.61808907	1.1083168	0.43845156	0.33386896	0.5591687	0.3141279	1.105129	0.26014477	0.29652685	0.40238777	0.4536689	0.58712063
Phase-1 RCT-270	0.7395225	0.6204899	0.84833825	0.4151418	0.3597089	0.36337128	0.55158484	1.298134	0.4058925	0.47332224	0.3988705	0.5260442	0.68094524
Transferrin	0.5614568	0.5726632	1.2988193	0.2065732	0.35337764	0.4204995	0.51786484	0.873577	0.32160974	0.2732224	0.3988705	0.5260442	0.68094524
Hepatic lipase	0.27895135	0.40666988	0.7395916	0.4280441	0.5239854	0.52642244	0.56898135	0.6298937	0.39374915	0.4584684	0.4118915	0.39527565	0.29031652
Cytochrome P450 11A1	0.87542194	0.6473064	1.2280852	0.68910728	0.57321656	0.70213696	1.0213696	1.019282	0.54068315	0.55168408	0.80773548	0.801038	0.5569436
Phase-1 RCT-162	0.7887037	0.8432572	1.3708517	0.63694286	0.671341	0.81722696	0.6683247	0.7014307	0.7437483	0.5238848	0.5964308	0.68596256	0.5110082
14-3-3 zeta	0.84973717	0.91038543	1.1311103	0.565919	0.8138217	1.153996	1.4153996	1.2539016	1.9923091	1.7873098	0.29728845	0.3489244	0.26871652
Cytochrome P450 2C23	0.7379789	0.67746323	0.8918667	0.9432769	0.70112844	0.8915008	0.85602	0.50918937	0.39393038	0.29728845	0.3489244	0.26871652	0.2109297
Voltage-dependent anion channel 2 (Vdac2)	1.0130697	0.92129904	1.143048	0.88787784	0.81729585	0.9300347	2.141201	1.9448859	1.9158632	1.7600443	2.0645165	1.5187922	2.1096297
Phase-1 RCT-154	2.6586885	2.5475147	2.2485664	1.0981405	0.7214875	0.9935927	1.123611	1.3041165	1.4508433	1.4068342	1.1777606	2.0881333	
Superoxide dismutase Mn	1.2139889	1.0029622	1.3913771	2.3443198	1.9280921	2.6753087	1.6108605	3.0746365	1.6398455	1.9492786	3.2306386	3.2306386	
c-myc	1.8824652	1.4593872	0.9192107	2.6966634	1.8458204	2.4414591	2.272981	1.148286	2.9808804	3.041558	2.5274923	1.803315	2.5014287
Phase-1 RCT-196	0.9698325	0.9596937	0.91081755	1.4006642	1.7646747	1.7943101	1.5309744	0.9701351	1.694467	2.087976	1.6561388	1.536627	1.455904
Cyclin G	4.177021	5.5452766	3.072167	1.4286355	1.6611838	1.6551875	2.848438	1.0317868	1.7417202	1.8202311	1.857407	1.29541	4.071453
Calgranulin B5	1.1411692	1.1041021	0.9243209	1.1742665	1.2959218	1.1928128	0.861967	0.8774201	1.5793187	1.090248	1.454801	1.35458	2.3546832
p53	0.6076869	0.7704963	1.0029769	1.3007476	1.3882864	1.1080066	1.4482548	1.1330049	1.7004056	1.4421312	1.3625181	1.1612202	1.2768244
Phase-1 RCT-205	1.0723933	0.9298308	0.7686966	1.500363	1.4831738	1.3163437	1.3004432	0.817663	2.0407875	1.553151	1.5094599	1.5168543	1.6502225
Phase-1 RCT-68	1.2578963	0.8270594	1.0018991	1.1050183	1.208668	1.2158271	0.972381	1.1215724	1.8874464	2.0802522	1.8923519	1.5168543	1.6502225
Caspase 3	1.2578963	0.8270594	1.0018991	1.1050183	1.208668	1.2158271	0.972381	1.1215724	1.8874464	2.0802522	1.8923519	1.5168543	1.6502225
Alpha-tubulin	0.975397	0.7694706	0.96883786	1.2553315	0.9857353	1.0597126	2.0141196	1.8109642	2.098743	2.628895	2.769235	2.000864	2.5460844
Ribosomal protein L13A	1.2889701	1.2985214	0.87521744	1.1841584	1.1343346	1.4561076	1.4163593	1.3583354	1.3620456	1.3220665	1.097769	3.1056318	
IgE binding protein	1.0494285	0.9993994	0.7731485	1.34147	1.735472	1.292806	1.2794008	0.9004854	1.6554738	1.3922668	1.3427893	1.821247	
Phase-1 RCT-39	1.1655151	1.1505121	1.1726911	1.1345875	0.9967066	1.1302248	1.2234272	1.4714108	15.024095	17.7012	19.530851	12.751945	2.906816
Heme oxygenase	1.0006491	0.7658498	0.7037601	1.478942	2.1035345	1.8073334	12.234272	1.4714108	15.024095	17.7012	19.530851	12.751945	2.906816
Phase-1 RCT-241	1.1250352	1.3712897	0.922286	2.4354577	2.2945816	1.9338869	2.0369186	0.8758043	2.5944228	2.0846885	1.284157	1.1660014	1.4213411
Ribosomal protein S9	0.9522787	0.8076319	1.432359	1.3421640	0.84159815	1.244653	1.820619	1.2715254	1.5436881	1.8664077	1.4525287	1.3470937	1.2598555
Argininosuccinate lyase	0.9606846	1.0502334	0.7875824	1.2287164	1.123066	1.133633	1.1859962	0.9631207	1.5418757	1.6490989	1.3589353	1.3581912	1.428127
Phase-1 RCT-180	2.097388	1.534673	0.5514495	1.4018197	1.0694713	1.4711878	2.651008	1.7840364	2.1451428	2.2517676	2.6117766	1.5881912	1.2913755
Multidrug resistant protein-1	5.2112846	6.6054928	2.7571132	3.6975641	1.1814623	3.4660316	0.9573524	1.4680818	2.0744915	1.8355577	2.0215464	1.461566	2.874373
Ominase decarboxylase	1.3365344	1.0872822	0.7047622	1.8478767	1.6830907	1.9256781	2.7621648	1.4680818	2.0744915	1.8355577	2.0215464	1.461566	2.874373
Thymine beta-10	1.0044553	0.8322879	2.984791	1.2212476	1.057881	0.9687337	1.3212045	1.3671318	1.3729108	1.1893088	1.4680818	1.4779478	2.241151
Phase-1 RCT-72	1.1017557	0.8191091	0.9380809	1.0519286	1.235016	1.1354774	1.0791714	0.8669586	1.4422833	1.7730872	2.1288998	2.588773	
Phase-1 RCT-109	0.8798327	0.8433958	0.9243865	1.541326	0.974038	1.113037	1.891125	1.651463	2.259689	2.750473	2.6292863	2.0884362	
Phase-1 RCT-76	0.7557179	0.83915955	0.82887006	1.029872	1.1210849	1.003859	1.360445	1.3013035	1.3017368	1.2793087	1.30031	1.2883135	0.98723908
Vacuole membrane protein 1	1.0284852	1.338311	1.3594483	1.5726861	1.1807325	1.5724632	2.3771183	2.1515354	2.1051927	1.699374	1.5229895	1.1200678	1.3528583

Phase-1 RCT-158	1.229285	1.470488	1.2454925	1.3566841	1.2171707	4.1736364	0.82038677	8.2314205	8.10554	5.480545	3.1531248	1.0998789
Phase-1 RCT-113	1.1948328	1.6234491	1.4817379	1.4816358	1.7254816	1.571515	0.94697326	1.5491126	1.2205118	1.0894811	1.0139832	1.0570803
Endogenous retroviral sequence, 5' and 3'	0.8274848	0.7270998	0.97860044	0.8818609	1.0033368	1.0850494	1.8541503	1.6462102	2.8876267	1.482342	1.0769471	2.8507914
LTR												
Beta-actin	0.54395413	0.50408936	0.897674	1.3963703	1.3947511	1.1259688	2.485753	1.8162844	2.6004833	1.7813828	1.4456668	2.4132357
Phase-1 RCT-65	1.7487537	1.530548	0.885216	1.3543745	1.6250447	1.3190268	1.7058478	1.2298528	1.8551998	1.8728485	1.4601291	1.7595051
MHC class I antigen RT1.A1(0) alpha-chain	3.8330574	2.383897	1.0468684	1.5891622	2.008882	1.3200445	1.4065083	1.2865989	1.8331797	1.8504945	1.8078386	1.792557
Bax (alpha)	1.1118253	1.1582731	1.5667136	1.3595716	1.5977923	1.2590659	1.53816	1.4139767	1.3273505	1.8367341	1.7119584	1.8403947
Carbonyl reductase	1.2957275	1.2126508	0.9466308	1.3311848	1.2950934	1.2493875	1.6782226	1.0350068	1.3749789	1.6399505	1.494583	1.8659124
Beta-actin, sequence 2	0.8223765	0.468573	0.7081435	1.1774303	1.1707486	1.0415404	1.7415736	1.7199182	1.797293	1.1822512	1.0958151	1.483302
Interleukin-10	1.353408	1.428408	0.82039054	1.5953307	1.5524945	1.353978	1.7098858	1.4527165	1.0645441	1.2539866	1.3240098	1.653152
Phase-1 RCT-191	2.2785156	2.0367167	0.7249804	1.6250434	1.38287	1.5593768	1.728488	1.431657	1.3088089	1.3094732	2.43825	2.0818464
Phase-1 RCT-111	0.800823	0.87229455	0.7785304	0.91501768	1.0621802	1.1543021	1.491869	1.431657	1.3088089	1.3094732	1.1032851	1.0872564
Apoptosis-regulating basic protein	0.6965337	0.80748713	1.8243901	0.45588332	0.5188617	0.5167759	0.6420245	0.82760887	0.55070424	0.5024909	0.5406568	0.5406568
Glutathione peroxidase	0.5432186	0.6399549	1.473828	0.42614537	0.5171598	0.50896635	0.358084	1.0305332	0.3955971	0.34886202	0.3361981	0.33522188
Phase-1 RCT-67	1.8452631	1.1058224	0.7785404	0.9437185	0.7811502	0.8346975	0.81689316	0.8015556	0.801325	0.7411042	0.78744817	0.8460498
Tryptophan hydroxylase	0.9738195	0.8593299	1.370575	0.5484634	0.6568035	0.701942	0.8015556	0.8015556	0.8015556	0.8015556	0.8015556	0.8015556
Sulfotransferase K2	0.3182894	0.35529198	0.5096699	0.41571143	0.538128	0.41791013	0.6859677	1.1318385	0.51270354	0.6538461	0.7019942	0.5733002
Cellularin B9	0.96477884	0.8421174	0.89862454	0.8985725	0.70754033	0.7610768	0.7573884	0.94362116	0.8130513	0.6822753	0.76186517	0.7189387
Phase-1 RCT-123	1.366702	1.2180126	0.88251677	0.8956644	0.902762	0.905902	0.7151893	0.6827516	0.8648182	0.8586566	0.8586161	0.88235295
Phase-1 RCT-48	1.4030994	1.1869816	0.8492396	0.89839566	0.894152	0.9251953	0.7560144	0.6770882	0.8942165	0.8456684	0.8401846	0.80794066
Aquaporin-3 (AQP3)	1.488509	1.1874985	0.88644546	0.8900887	0.91774483	0.8851464	0.75933754	0.6954355	0.85351336	0.8600684	0.8228055	0.869453
Stearyl-CoA (sesaturase, liver	0.059449384	0.030466117	0.3952938	0.15340867	0.2027213	0.22490351	0.15694514	0.21818882	0.1239031	0.09480253	0.10421697	0.09173717
Phase-1 RCT-84	0.563944	0.49990262	0.78716905	0.57445437	1.1255088	0.8442548	0.63704973	0.80610037	0.6228832	0.7098378	0.7273017	0.7294386
(1) Gene expression data for 24 hour												
(timepoint are presented as mean ratio of												
treatment/control for all 24 hour predictive												
genes (Table 5).												
(2) Compound and dose abbreviations as in												
Table 1.												
(3) Individual animal number												
(4) Liver inflammation classification for												
compound-dose group at 72 hr: yes=next,												
necrosis observed; yes=both, necrosis with												
inflammation observed; no, no histopathology												
observed												
(5) Predictive gene (as in Table 5 and as												
included in Table 26)												

Table 29

Table 28. Expression Data for 24 Hour Timepoint (1)													
Compound-Dose (2)	CCL4 1000	CCL4 1000	DMN 20	DMN 20	DMN 20	DMN 20	LPS 8	LPS 8	LPS 8	LPS 8	LPS 8	MET 1.3	MET 5
Animal Number (3)	2055	2056	1754	1755	1756	1756	yes-both	yes-both	yes-both	yes-both	yes-both	224	235
Liver Toxicity Inflammation Classification (4)	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	yes-both	no	no
Gene Name (5)													
Gamma-actin, cytoplasmic	3.0457294	3.9200022	2.1755028	2.3950645	1.820712	6.400891	1.7433478	2.6559298	1.7433478	0.59216034	1.5311049	0.9793918	1.1214224
Phase-1 RCT-145	1.9843301	1.7556795	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305	1.34305
Gad645	4.1651983	1.8416984	2.0463075	2.1846497	2.416181	2.7723435	1.1335245	1.1335245	1.1335245	1.1335245	1.1335245	1.1335245	1.1335245
Phase-1 RCT-78	0.5866493	0.6198331	0.6769897	0.7401357	0.83120127	0.96560117	0.7173856	2.3735297	0.96560117	0.87216719	1.0957514	1.0818332	1.2040777
Fas antigen	2.0001362	3.0729573	1.6169696	1.5319164	1.4859537	2.5903404	1.3590244	1.3590244	1.3590244	1.3590244	1.3590244	1.3590244	1.3590244
Macrophage inflammatory protein-2 alpha	4.3032336	4.11834	5.5702376	3.9283493	5.477772	6.18203	0.9923767	0.9923767	0.9923767	0.9923767	0.9923767	0.9923767	0.9923767
Integrin beta1	5.1019516	3.8175101	1.573644	1.4826477	1.8222693	2.8472126	1.6162631	1.6162631	1.6162631	1.6162631	1.6162631	1.6162631	1.6162631
Phase-1 RCT-207	2.323234	2.062179	4.982027	5.8372107	4.231134	2.3718715	1.6958535	1.6958535	1.6958535	1.6958535	1.6958535	1.6958535	1.6958535
Aspartate aminotransferase, mitochondrial	0.7174555	0.84036934	0.8076922	0.7830575	0.7425922	0.8082463	0.9271775	0.9271775	0.9271775	0.9271775	0.9271775	0.9271775	0.9271775
Casimir-alpha	1.0056681	0.8711376	0.8794668	0.9016733	0.8956475	0.8201881	0.8578128	0.8578128	0.8578128	0.8578128	0.8578128	0.8578128	0.8578128
Malic enzyme	1.1382632	1.0568672	0.633715	0.63081396	0.55756934	0.26174328	0.2699147	0.2699147	0.2699147	0.2699147	0.2699147	0.2699147	0.2699147
Phase-1 RCT-30	0.68412655	0.7910173	0.8815254	1.0278599	1.005078	0.5515831	0.5111718	0.5111718	0.5111718	0.5111718	0.5111718	0.5111718	0.5111718
Hepatocyte growth factor receptor	1.0722193	0.8494952	1.578555	0.932206	1.2575308	1.0610369	1.31309	0.95441865	1.31309	0.95441865	1.31309	0.95441865	1.31309
NAP kinase kinase	1.9126287	1.3715352	1.0449365	0.8797045	1.009818	1.800533	1.416094	1.1958083	1.416094	1.1958083	1.416094	1.1958083	1.416094
Sodium/glucose cotransporter 1	1.0738642	0.9881468	0.57226338	0.76214784	0.9687112	1.8305595	2.1260047	1.7785423	2.1260047	1.7785423	2.1260047	1.7785423	2.1260047
Phase-1 RCT-27	0.911912	0.8068121	1.1970294	0.7666303	0.36844408	1.64343	1.6923594	0.9011685	1.6923594	0.9011685	1.6923594	0.9011685	1.6923594
Phase-1 RCT-50	2.380688	1.7364157	1.8440811	2.034157	2.052921	2.4425428	1.1325245	1.2060434	1.1325245	1.2060434	1.1325245	1.2060434	1.1325245
Phase-1 RCT-192	3.1902063	2.980057	1.4761972	1.4704692	1.5566491	1.0021596	1.355269	1.1878891	1.0021596	1.355269	1.1878891	1.0021596	1.355269
Phase-1 RCT-288	0.31864136	0.27191877	0.5253037	0.5078076	0.44922593	0.36814278	0.7276074	0.8314838	0.36814278	0.7276074	0.8314838	0.36814278	0.7276074
Phase-1 RCT-37	2.3224966	2.2411325	1.2078261	1.2474034	1.2350766	1.3789408	1.4027918	1.3393437	1.3789408	1.4027918	1.3393437	1.3789408	1.4027918
Organic cation transporter 3	1.160059	3.1784884	1.645537	1.6556724	1.4823074	2.0862268	1.8236203	1.4894365	2.0862268	1.8236203	1.4894365	2.0862268	1.8236203
60S ribosomal protein L6	3.3645399	3.5781338	1.7731404	1.7175868	1.5630764	2.5147152	2.0606655	1.5468894	2.5147152	2.0606655	1.5468894	2.5147152	2.0606655
Zinc finger protein	2.9112052	2.035537	2.952278	2.9595589	2.332278	4.254339	1.4791515	1.481937	4.254339	1.4791515	1.481937	4.254339	1.4791515
Calgranulin B2	1.9173334	3.3789022	1.095947	1.19114	1.2617226	1.2257378	1.422657	0.69687194	1.2257378	1.422657	0.69687194	1.2257378	1.422657
ID-1	1.6156043	1.7759207	1.6622872	1.7349473	1.874152	1.9203006	1.7582985	2.066847	1.9203006	1.7582985	2.066847	1.9203006	1.7582985
Phase-1 RCT-42	0.25894596	0.2166238	0.4548767	0.55762994	0.45855014	0.1824703	0.4788028	0.5462084	0.1824703	0.4788028	0.5462084	0.1824703	0.4788028
Phase-1 RCT-115	2.020877	2.3118594	1.2843409	1.3932277	1.4176656	1.6658559	1.1401705	0.9285235	1.4176656	1.6658559	1.1401705	0.9285235	1.4176656
Myelin F/G	0.4180168	0.42278603	0.8148238	0.6803009	0.8657567	0.36553124	0.730065	0.6868141	0.36553124	0.730065	0.6868141	0.36553124	0.730065
Myelin basic protein (MLH1)	1.5023028	1.4554088	1.0671775	1.0746778	1.0790838	1.3494045	1.2551546	0.9936828	1.3494045	1.2551546	0.9936828	1.3494045	1.2551546
Phase-1 RCT-78	1.6893051	1.6808004	1.1245923	1.1238045	1.0110317	1.0291467	0.9545733	0.8635982	1.0291467	0.9545733	0.8635982	1.0291467	0.9545733
Sorbitol dehydrogenase	1.6782897	2.1032856	1.0663562	0.8518618	0.88889384	0.72257704	1.0474149	1.063	0.88889384	0.72257704	1.0474149	1.063	0.88889384
Phase-1 RCT-81	2.849782	3.6622874	1.3749506	1.3549063	1.1601657	0.7115387	0.771485	0.6905032	0.7115387	0.771485	0.6905032	0.7115387	0.771485
Calgranulin B1	1.0675035	1.955545	1.1858847	1.2329136	1.316865	2.2977882	1.3673705	1.1954653	1.3673705	1.1954653	1.3673705	1.1954653	1.3673705
Elongation factor-1 alpha	3.4633143	3.0597136	1.2317096	1.1826849	1.0801109	1.4001268	1.5824631	1.1562812	1.4001268	1.5824631	1.1562812	1.4001268	1.5824631
L-glutathione gamma-lactone oxidase	0.28394348	0.33884734	0.1092202	0.14101827	0.10245224	0.15400878	0.42840254	0.7763827	0.15400878	0.42840254	0.7763827	0.15400878	0.42840254
Phase-1 RCT-33	0.38035818	0.4145723	0.68964243	0.5836725	0.56719004	0.37204096	0.5170198	0.5720211	0.37204096	0.5170198	0.5720211	0.37204096	0.5170198
C-Jun	2.5174065	2.6855447	2.5941537	2.7955986	4.314487	2.6335511	0.74691285	0.6617427	2.6335511	0.74691285	0.6617427	2.6335511	0.74691285
Phase-1 RCT-233	0.36051628	0.3788895	0.39936015	0.36648917	0.3780884	0.2411879	0.50295556	1.3469799	0.2411879	0.50295556	1.3469799	0.2411879	0.50295556
Phase-1 RCT-38	0.553333835	0.301813	0.7938576	0.7028284	0.7118964	0.6817357	0.79093343	0.73144778	0.6817357	0.79093343	0.73144778	0.6817357	0.79093343
Phase-1 RCT-242	2.502859	1.9304981	2.65577	2.743458	3.0169445	2.733232	1.0108131	1.755054	2.733232	1.0108131	1.755054	2.733232	1.0108131
Phase-1 RCT-181	0.5210405	0.5422325	0.8564093	0.7138847	0.6847149	0.6005487	0.7634349	0.9005349	0.6005487	0.7634349	0.9005349	0.6005487	0.7634349
Phase-1 RCT-185	0.38510843	0.3859088	0.66616673	0.7285263	0.39735415	0.36135862	0.3755598	0.36093224	0.36135862	0.3755598	0.36093224	0.36135862	0.3755598
Phase-1 RCT-179	4.3181844	3.5845747	1.8037996	1.7831013	1.6343557	2.1980865	2.131917	1.072667	2.1980865	2.131917	1.072667	2.1980865	2.131917
Phase-1 RCT-144	2.8818834	2.322137	1.8190725	1.5688545	1.4747944	1.6095161	1.4690024	1.020489	1.4690024	1.020489	1.4690024	1.020489	1.4690024
IKB-alpha	3.2208064	3.0759237	1.2719116	1.1193463	1.1730907	1.1193463	1.798769	1.3409535	1.1193463	1.798769	1.3409535	1.1193463	1.798769
Phase-1 RCT-225	4.8842787	7.39835	1.8376107	1.8109711	2.8840844	2.2128638	1.0646118	0.6646972	2.2128638	1.0646118	0.6646972	2.2128638	1.0646118
60S ribosomal protein L6 (allomate done 1)	3.3378031	2.702234	1.5689124	1.56834	1.4911461	2.3021507	1.8350469	1.5237614	2.3021507	1.8350469	1.5237614	2.3021507	1.8350469
Beta-tubulin, class I	4.5409718	4.0335603	1.5651003	1.5743562	1.3539561	1.60003	1.4484888	1.0494959	1.60003	1.4484888	1.0494959	1.60003	1.4484888
Calnexin	5.6216693	4.368376	6.537999	5.2299156	6.291526	1.610459	1.3831802	1.1887408	1.610459	1.3831802	1.1887408	1.610459	1.3831802

Table 29

Phase-1 RCT-49	2.9415908	1.8672978	1.2631255	1.5471046	1.5203933	1.1185461	1.028222	0.9284726	0.81307104	0.8405608	0.8301092	0.8740884
Calgranulin B3	1.6693668	1.7128414	1.4119722	1.3509684	1.3228017	1.9665909	1.912058	1.2079656	1.0703878	1.0274892	0.97136174	0.9436655
NADP-dependent isocitrate dehydrogenase, cytosolic	0.43368438	0.40814877	0.569176223	0.48656114	0.4070333	0.1745034	0.82572804	0.793716	0.9166569	1.0907234	1.4266692	1.5394283
Oxyster binding protein 1	0.6540581	0.80922015	0.8150219	0.9360221	0.7546331	0.4944048	0.61837684	0.7850298	1.5319337	1.1380426	0.8821601	0.84890114
Sodium/bile acid cotransporter	0.26004163	0.18272866	0.3455223	0.3903255	0.086428115	0.1735387	0.27613932	0.52268405	0.5911849	0.6085194	1.4807682	1.18271
Phase-1 RCT-174	1.0480714	0.745312	0.8857223	0.90015703	0.8670543	0.5732449	0.71339005	0.5766298	1.3935357	0.95776825	1.3845551	1.180378
Phase-1 RCT-177	0.84035964	0.50132763	0.86274123	0.8148804	0.8406891	0.38784628	0.84648306	0.52505016	1.174286	0.91710011	1.288565	1.0397905
Inositol polyphosphate multikinase (pmk)4	0.21548773	0.18891095	0.54658014	0.47968003	0.25273062	0.48828772	0.91111267	0.91111267	0.1784885	0.8051495	1.2268013	1.1306336
Phase-1 RCT-256	0.49094513	0.6471754	0.4204458	0.46815492	0.17831958	0.49527168	0.94656814	0.59931944	0.83458066	0.6473118	0.9401882	1.0421045
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	0.3744075	0.4208692	0.6519004	0.5300047	0.44785407	0.3818815	0.702141	0.43371373	0.77792406	0.85601765	1.0200003	0.86330205
CDK102	0.74414176	0.78405687	0.8645643	0.862111	0.78651625	0.8527632	0.84026367	1.2923011	0.59050751	0.9167233	0.8255402	1.1687086
Phase-1 RCT-209	0.5907216	0.49724624	0.8955884	0.9414888	0.8758474	0.6317432	0.80139546	1.076094	1.3510139	0.94147485	1.0527578	1.0205718
NADH-oxochromol b5 reductase	0.43353412	0.5047215	0.5047215	0.5077278	0.38888652	0.3321142	0.4546813	0.47001243	0.6227276	1.0418127	1.3006737	1.2885541
Dynamin-1 (D100)	0.3681365	0.31565648	0.6928623	0.63176833	0.58818907	0.43111712	0.5552758	1.7845032	1.090302	0.8396385	0.90903	0.9697427
Synascence marker protein-30	0.2534248	0.17354265	0.24839182	0.21349008	0.06579765	0.8578165	0.49014518	0.55011857	1.593042	1.0945669	1.2854389	1.075281
Phase-1 RCT-89	0.33522076	0.40852574	0.5909707	0.61091538	0.58325267	0.37036335	0.726477	0.63374525	0.6617778	0.8598978	1.1475078	1.0847486
Carbonyl palmitoyl-CoA transferase	0.33728147	0.32338147	0.8997526	0.980608	1.3405445	1.2494368	0.8531129	1.0810103	2.2481048	1.3139156	1.2890938	0.9523708
Alpha-2-microglobulin	0.14315583	0.1770173	0.37453702	0.58105524	0.21422502	0.6982967	0.6198654	0.48248978	0.6383925	0.5254379	0.4713894	1.1618025
Apolipoprotein CII	0.36450067	0.35449484	0.6039383	0.6406828	0.55549593	0.47263368	0.5027271	0.7018134	1.178826	0.9145267	1.022237	1.2500895
Phase-1 RCT-141	1.2835271	0.7841519	1.6178365	1.6256543	2.306591	10.688544	9.82203	2.8128533	0.8473241	0.89428353	0.9291087	1.008592
Phase-1 RCT-289	0.48465392	0.43236578	0.53191566	0.55069714	0.5108857	0.4459541	0.61501247	0.7895287	0.8278764	0.8953385	0.9223841	1.0776959
Endothelin-1	0.76616204	0.84670347	1.280776	1.1617253	1.2084104	1.8400671	1.2246236	1.0643941	1.2876842	0.8850048	0.9151356	0.90099523
Phase-1 RCT-282	1.013517	0.79946226	1.1671086	1.124803	1.1109184	0.98144215	1.0089845	0.9754369	1.1123513	1.458041	0.87451065	0.7758838
Phase-1 RCT-140	1.0440289	0.8991315	1.090186	1.078709	1.0528091	1.080747	1.0419546	1.0286999	1.3486861	1.0064539	0.92307705	0.8164228
Cydlin D1	1.9289282	2.9871862	0.9169333	1.2184945	1.0760468	0.8910112	0.8471063	0.63447684	0.8284761	1.4204202	1.2752089	1.0953703
Phase-1 RCT-287	1.0528924	0.9719282	0.60572934	0.4400736	0.59155585	0.8136353	1.1973985	0.8136353	0.915504	0.8541708	0.9283089	0.84724826
Phase-1 RCT-281	0.87672893	1.0360965	1.13010426	1.2709337	1.3529108	0.55136985	0.6842718	0.9718699	0.8515004	0.6547308	0.9283089	0.84724826
Retinol-binding protein (RBP)	0.4760031	0.32161983	0.67238423	0.6610238	0.67238423	0.61537178	0.95198647	1.2572738	0.6009221	1.162802	1.3141178	1.2895528
ATP-stimulated glucocorticoid-receptor translocation promoter (GK)	0.7285475	0.6146453	1.0486373	1.0486373	0.816365	0.715552	1.165089	0.711846	0.85984054	0.9354007	1.1286221	0.85464178
Phase-1 RCT-60	2.0506294	1.7520926	1.1891692	1.079545	1.1034088	1.2357916	1.1604015	0.97060953	1.1150306	1.0416637	0.8338108	1.0102227
Pyruvate kinase, muscle	2.452139	4.8594083	1.102097	0.97605276	1.104562	5.7231703	3.637648	2.5874855	1.3910917	1.1413805	1.0162992	1.0047013
PAP interacting protein	1.8047488	1.5374928	1.3036879	1.372997	1.3069781	1.5500888	1.3725723	0.9911812	0.9786869	1.122458	1.1678734	0.89874005
Nucleoside diphosphate kinase beta isoform	3.1666315	2.6818887	1.6010534	1.8418049	1.6392882	1.6041514	1.8604731	1.4666766	0.8383944	0.904265	1.1035591	0.9072705
Gadd153	3.9716643	3.3575413	3.5105417	3.7394226	3.718889	2.550709	2.37844	1.2583137	1.7231433	1.6805246	1.2284554	0.81670105
Insulin-like growth factor binding protein 1	4.09912	2.8876137	1.542871	1.2521566	1.75171	0.570809	0.3451118	0.4176188	0.978361	0.5810647	0.6883761	1.0085698
c-H-ras	1.5157272	1.2628487	2.1059286	1.908223	1.8544047	1.533287	1.7208844	1.4184655	2.1570125	1.026286	0.8479259	0.9597188
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.2415767	0.42311034	0.48472396	0.41917565	0.33224914	0.18772453	0.6187165	0.32508472	0.6782146	0.82163507	0.7880428	1.1226163
Phase-1 RCT-62	0.49821877	0.53748256	0.48576978	0.44423056	0.33581656	0.38131418	0.48837078	0.38315743	0.6054461	1.0198327	1.2860135	0.97843244
Alpha 1 - inhibitor III	0.2710247	0.22687924	0.30981296	0.28094555	0.17643473	0.23649451	0.21744502	0.16594468	0.8074134	0.87534785	0.97129166	0.7824219
Steroid carrier protein 2	0.6170321	0.5178474	0.65358465	0.7042097	0.626687	0.26534784	0.8490323	0.7418839	0.65621597	0.8491805	1.0503608	1.1149167
Organic anion transporter 3	0.6115555	0.6187844	0.61303824	0.6805446	0.80277354	0.4978865	0.4288448	0.78248884	0.8157177	1.4590472	1.2482497	0.9998856
Calgranulin B4	0.35119485	0.3578352	0.31305525	0.49488137	0.41986294	0.34921228	0.840124	0.5590386	1.160017	0.9678867	1.1657137	1.0745115
Phase-1 RCT-182	0.38362607	0.4918345	0.6815787	0.6868833	0.47037328	0.1988338	0.4732614	0.9002813	0.5534378	1.028285	1.177864	1.2754034
Calgranulin B8	0.38362607	0.4918345	0.6815787	0.6868833	0.47037328	0.1988338	0.4732614	0.9002813	0.5534378	1.028285	1.177864	1.2754034
Aldehyde dehydrogenase, microsomal	0.38362607	0.4918345	0.6815787	0.6868833	0.47037328	0.1988338	0.4732614	0.9002813	0.5534378	1.028285	1.177864	1.2754034
Phase-1 RCT-126	0.26315305	0.1965372	0.7647163	0.7000017	0.41240656	0.12872088	0.2610953	0.2388717	0.43255102	0.87283407	0.78219714	1.0572059
Phase-1 RCT-102	0.31837594	0.2659788	0.49617773	0.3707788	0.23623748	0.1698048	0.4325596	0.4368718	0.6310969	1.0672108	0.77609284	0.8447
Preproalbumin, sequence 2	0.13407543	0.21925701	0.4352991	0.3707788	0.23623748	0.1698048	0.4325596	0.4368718	0.6310969	1.0672108	0.77609284	0.8447
Apolipoprotein AII	0.3138087	0.32505375	0.50527436	0.5212826	0.68908024	0.32083398	0.9099002	0.7285846	0.3592844	0.23127187	0.23520419	0.71351707
Phase-1 RCT-46	0.8350863	1.022386	0.50527436	0.5212826	0.68908024	0.32083398	0.9099002	0.7285846	0.3592844	0.23127187	0.23520419	0.71351707
Phase-1 RCT-5	0.30850732	0.3046616	0.4830673	0.5103014	0.42729688	0.27155932	0.46757575	1.5813137	0.5208392	0.96182677	1.3363092	1.3489791

Table 20

Phase-1 RCT-168	0.43322743	0.47028422	0.5985751	0.54473907	0.49088004	0.48476455	0.7845792	0.7486253	0.6622288	0.90822583	0.85249888	0.9106722	1.0111204
Phase-1 RCT-68	0.4300733	0.26471233	0.6943669	0.7229517	0.7016216	0.38657817	0.77914315	0.69255975	1.1194781	0.9231552	1.1490282	1.57613	
Beta-oxidation synthase	0.3427218	0.27813858	0.7182424	0.71319556	0.63899493	0.98074234	0.41717828	1.1216931	0.9531623	0.68228513	1.8447229	1.7765839	
Phase-1 RCT-286	0.19879417	0.3182876	0.2677585	0.23157519	0.2159834	0.21168052	0.30700776	0.26083566	0.756145	0.7051622	0.8512813	1.4171555	1.3084165
Carbonic anhydrase III	0.07362342	0.03951074	0.11952618	0.270924516	0.07024415	0.01178743	0.2134445	0.04845667	0.8490872	1.3927325	1.4924064	1.31315	1.3084165
Phase-1 RCT-291	0.45855042	0.48904678	0.61757505	0.62519874	0.60951415	0.3430022	0.6811923	0.7038753	0.7811222	0.7203953	1.1668905	1.2674105	1.1148018
Carbonic anhydrase III, sequence 2	0.29977985	0.12716717	0.46176437	0.44901344	0.43250716	0.10789847	0.65318307	0.40052873	0.9853065	0.6779928	0.9806087	1.2727325	1.8314855
Phase-1 RCT-271	0.83669823	0.6164485	0.4650367	0.4629361	0.40870058	0.28951885	0.3692878	0.68198897	0.9853065	0.9144318	1.2221122	0.9740108	1.38257
HMG-CoA synthase, mitochondrial	0.2546302	0.38559754	0.43802586	0.51363784	0.580474	0.28927147	0.8243523	0.72624516	1.6807578	1.32387	1.028481	1.0779593	
Phase-1 RCT-189	0.5589878	0.4924721	0.7239136	0.7272737	0.7230405	0.8204568	0.9108075	0.2782378	0.7625416	1.0040705	0.95480074	1.0286285	1.2210543
Phase-1 RCT-40	0.8049822	0.6799528	0.7428539	0.7488237	0.5309288	0.48524282	0.8891092	0.5995952	0.63853544	1.060215	0.91032434	1.2891872	1.2122601
Uridylate protein 2 precursor	0.2955585	0.14770149	0.4832205	0.39648073	0.34513474	0.38392375	1.1122072	0.74711007	0.74711007	0.3913908	0.39449674	0.9639291	0.9285457
Paraoxonase 1	0.30580345	0.28917864	0.3920687	0.3948041	0.39332375	0.20130484	1.3522886	0.3522886	0.4821432	0.7346454	1.0388867	1.3032759	1.2379159
Liver fatty acid binding protein	0.33822393	0.24945676	0.3516527	0.3246081	0.30063456	0.11616285	0.80791737	0.36090923	0.4089504	0.4787793	0.46761113	1.2881334	1.0337187
Presenilin-1	0.31491814	0.23990813	0.30107158	0.2697094	0.17081368	0.18214242	0.4011415	0.19250913	0.4661193	0.50358426	0.35957724	0.8991827	1.0735395
Phase-1 RCT-38	0.41595993	0.5397304	0.4116357	0.4577693	0.40101415	0.19250913	0.4661193	0.50358426	0.35957724	0.8991827	1.0735395	1.0735395	
Phase-1 RCT-270	0.5490685	0.69739205	0.36016184	0.46598174	0.35803324	0.7376154	0.82222667	0.73342437	0.40278018	0.70378873	0.7350139	1.0183108	0.9509033
Transferrin	0.2011055	0.13761618	0.43097855	0.424237	0.36734	0.19025129	0.30394447	0.37400135	0.2268487	0.28302508	0.24685984	0.9851535	0.7503385
Hepatic lipase	0.23987429	0.30345838	0.45962209	0.33470988	0.37400135	0.2268487	0.28302508	0.34322667	0.6268108	0.82128526	0.86192244	1.283678	1.279875
Cytochrome P450 11A1	0.23557782	0.19055889	0.34382612	0.40054855	0.41832458	0.62146028	0.97686343	1.0102112	1.0096276	0.67316854	0.8374238	1.283678	1.279875
Phase-1 RCT-175	0.56007449	0.5537707	0.7701113	0.8511128	0.74137487	0.62146028	0.97686343	1.0102112	1.0096276	0.67316854	0.8374238	1.283678	1.279875
Phase-1 RCT-137	0.3097174	0.33343822	0.7746869	0.8133801	0.74137487	0.62146028	0.97686343	1.0102112	1.0096276	0.67316854	0.8374238	1.283678	1.279875
Phase-1 RCT-117	0.434687	0.3112053	0.53072906	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215	0.43601215
Melanoma-associated antigen ME491	3.3384204	3.0576618	1.5296679	1.5107881	1.3708565	0.208101	2.3447323	1.5201687	1.472059	1.2441281	1.0607845	0.8289166	
Phase-1 RCT-12	2.8943422	2.7650568	1.3748502	1.5296679	1.3748502	1.3748502	1.3748502	1.3748502	1.3748502	1.3748502	1.3748502	1.3748502	1.3748502
Phase-1 RCT-152	3.8669693	2.2573147	1.7310591	1.9679004	1.6254013	1.952817	1.7218958	1.2162562	0.69081867	0.8882049	0.7017215	1.0821545	1.0314934
14-3-3 zeta	2.4876626	2.5851805	2.5322504	2.5469873	2.3486543	1.853727	1.726598	1.2884848	1.2783498	1.6986852	1.4774069	0.8549353	1.368843
Cytochrome P450 2C23	0.20464861	0.20651483	0.3366537	0.32730618	0.097233084	0.13247661	0.13247661	0.13247661	0.13247661	0.13247661	0.13247661	0.13247661	0.13247661
Voltage-dependent anion channel 2 (Vdac2)	2.6815848	1.945779	1.7784988	1.7033782	1.5794576	1.7463839	1.7317485	1.4183774	0.9015025	0.8803652	0.8322419	1.0999447	1.0770676
Phase-1 RCT-164	2.6554098	2.5966717	3.5815825	3.7613585	3.2897666	2.6424416	2.0896	1.5649568	1.1884556	1.0230782	0.83015925	1.0732797	0.86538476
Superoxide dismutase Mn	4.810452	3.3345268	3.1432778	3.045792	3.6470962	28.04024	7.822339	2.394923	0.7550042	0.897744	1.2815182	1.3424653	
c-myc	2.5362456	1.9832413	1.4373343	1.4935546	1.8225877	1.893587	1.154914	0.8650667	1.5931368	1.427438	1.202431	0.7665243	0.7922169
Phase-1 RCT-188	1.4656389	1.2985523	1.1983247	1.1531159	1.1065524	1.623163	1.145549	0.9181883	1.2341428	0.91721876	0.862568	1.0038535	0.9514876
Cyclin G	5.3407287	3.834693	14.40474	13.836155	11.28982	4.856463	2.08717	1.4569183	0.89508456	1.5431851	1.255742	0.8915296	0.94689863
Calgranulin B5	2.6289484	2.644523	2.270365	1.3416979	1.3896704	1.021275	0.9608669	0.7651958	1.2596477	0.9161675	1.1210262	0.8788341	0.8435837
p53	1.5792546	1.3919713	1.5384244	1.8138364	1.417432	1.5530196	1.5543927	1.0921013	0.8318277	0.9424017	0.95298984	1.0663828	0.9859852
Phase-1 RCT-205	2.1216888	1.7425519	1.3302377	1.1805426	1.1610519	0.000088	1.8188421	1.161093	0.1063558	1.0791504	1.0305186	1.0286635	1.0366718
Phase-1 RCT-68	2.1566505	1.4050556	1.495786	1.418502	1.9690349	1.7828883	1.8665108	1.2695843	1.0835787	1.3204883	1.3204883	0.9578059	0.8822821
Caspase 3	1.350516	1.1343979	1.068843	1.3947666	1.1243976	1.1851568	2.4813232	0.7169515	1.4589734	1.143957	1.1143957	1.077402	1.29255
Alpha-tubulin	2.076884	3.323692	1.594434	1.680383	1.655877	3.784436	2.5900264	1.666497	0.87298535	1.0250872	0.8357931	0.93605834	0.83341223
Ribosomal protein L13A	2.8066465	3.3036292	1.4944963	1.6520817	1.6520817	2.0334957	3.784436	2.5900264	1.666497	0.87298535	1.0250872	0.8357931	0.93605834
lgE binding protein	4.228893	2.518747	1.850185	1.6520817	1.6520817	2.0334957	3.784436	2.5900264	1.666497	0.87298535	1.0250872	0.8357931	0.93605834
Phase-1 RCT-39	1.6249001	1.6070769	1.6602291	1.8471423	1.690159	1.8075478	1.4177225	1.570497	0.9331037	1.1904167	1.310716	1.3227882	
Cofilin	3.1921583	2.1816916	1.9657408	1.2491082	1.7900773	0.75731807	4.1177225	1.570497	0.9331037	1.1904167	1.310716	1.3227882	
Heme oxygenase	2.2124736	1.7466692	1.8224822	1.8515382	1.8013882	1.854823	1.328568	1.328568	1.328568	1.328568	1.328568	1.328568	1.328568
Phase-1 RCT-241	1.8536006	1.864719	1.8973739	1.8643655	1.9321384	4.410043	2.4815652	1.755722	1.0405408	0.88765526	1.0526792	1.3150795	1.2541131
Ribosomal protein S9	2.353816	2.4559047	1.8041723	1.2748027	1.2205178	2.6673539	2.3430028	1.6080464	1.3776001	0.88765526	1.0526792	1.3150795	1.2541131
Phase-1 RCT-256	1.2575247	1.095708	1.2801701	1.2076132	1.1705775	1.4595515	1.5391624	1.030154	1.0290152	1.0485544	1.0507412	1.0062046	0.96540804
Agmatinosuccinate lyase	1.5525392	1.7829258	1.3006063	1.2197003	1.2713649	2.1823194	1.985101	3.443073	0.9882454	1.0053443	0.98850055	1.0456018	1.258429
Phase-1 RCT-180	1.3830785	1.42211651	1.3999623	1.3392003	1.3969623	1.304307	1.0581591	1.2047818	1.4875165	1.1603202	1.3603394	1.3672848	1.2404883
Multidrug resistant protein-1	4.672183	3.507157	6.194462	4.656507	6.861968	6.616986	1.8740501	1.2183998	1.2395845	1.5903449	1.3985597	1.1135201	1.0973839
Ornithine decarboxylase	2.6702077	1.5963312	3.36143	3.1633654	3.3052268	2.5982585	1.7417487	0.9407112	3.1154968	0.8993212	0.8490445	0.9509851	0.9187606
Thymidin beta-40	2.712783	3.1538043	1.8251298	1.7323481	1.5980833	3.9025621	2.8686851	1.6888744	0.8993212	0.8490445	0.9509851	0.9187606	0.9187606
Phase-1 RCT-72	2.5982408	2.14235	1.499445	1.5753512	1.3181504	1.5916523	1.1150602	1.5065164	0.8599255	0.5411397	0.46835558	0.8663757	1.0239697
Phase-1 RCT-109	2.4680685	2.470058	1.5446198	1.5332225	1.4501681	2.0901756	1.6830128	1.4481635	0.5411397	0.46835558	0.8663757	1.0239697	1.0239697
Phase-1 RCT-76	0.8527119	1.1089697	1.150923	1.3099422	1.3099422	1.0662171	0.87288725	0.87288725	0.87288725	0.87288725	0.87288725	0.87288725	0.87288725
Vacuole membrane protein 1	1.6187884	1.0717652	1.4340048	1.341724	1.5388853	1.4591691	0.8957753	0.9711073	0.6907842	0.73225663	1.0587793	1.2060816	

Table 29

Phase-1 RCT-158	1.040846	1.0534656	1.1326924	1.0347681	1.2588331	1.8789847	1.4833564	1.1527283	1.7211432	1.091826	1.0240816	0.9408622	0.7678133
Phase-1 RCT-113	1.200592	1.085174	1.6917669	1.719571	1.8525314	2.0072336	1.8078903	1.5203625	1.297648	0.9131623	0.8282165	1.0222727	1.0026542
Endogenous retroviral sequence, 5' and 3'	2.5316226	4.017355	1.1651069	1.4002427	1.8155566	2.6396678	1.2753332	2.98493	1.0718268	1.2716823	0.88894684	1.0623314	0.80168543
LTR	1.9375966	3.9194362	3.757428	3.3879229	3.3310884	4.541738	3.5038154	1.9381654	1.7933574	1.2144873	1.0650387	0.90652514	1.4332731
Beta-actin	1.872127	1.6192725	1.8160166	1.5001867	1.343297	1.543297	1.168955	1.0036343	2.4295921	1.3433158	1.2759155	0.93673897	0.953924
Phase-1 RCT-65	2.4207473	2.800605	2.5108418	2.2420886	2.5925955	2.2823365	1.3908875	0.90048337	5.089075	2.482735	2.0657809	1.2771666	1.305546
MHC class II antigen RT1A1 (alpha-chain)	2.037614	2.1600115	2.3857157	2.5559955	3.241329	1.9627922	1.3635134	1.0760796	2.721402	1.2327665	1.1441972	0.85434824	0.84231305
Bax (alpha)	1.922178	1.7814437	1.3840526	1.5300332	1.3416725	1.7387627	1.2162352	1.1286834	1.9037108	1.2623004	1.180303	0.9139171	0.86222625
Carbonyl reductase	1.5304941	1.8797337	1.815685	1.9562869	1.5818186	2.747517	2.159201	1.301584	0.6834991	0.74915314	0.7070718	1.0445542	1.1489203
Beta-actin, sequence 2	1.1165432	1.171089	1.1331552	1.2933403	1.4862773	1.5129097	1.6284155	2.2455423	2.1805665	1.2550635	1.0676422	0.7771851	0.76218516
Interleukin-10	1.2354523	1.5771224	1.4348435	1.8959845	1.4865715	1.4370487	1.0701076	0.9604765	2.8661226	1.1314224	1.2840335	0.8811881	1.0745221
Phase-1 RCT-191	1.1047789	1.3446344	1.1612452	1.358691	1.3700262	1.0850706	1.1692472	0.825945	0.7713503	0.7833568	0.8256437	1.0512552	1.1431639
Phase-1 RCT-111	0.55342665	0.5969476	0.7246956	0.7504253	0.64204655	0.6725213	1.1333556	1.0698755	0.67514163	0.8020088	0.6674851	1.0188705	0.8541415
Apoptosis-regulating basic protein	0.4441957	0.34222708	0.60332234	0.6860433	0.6253498	0.28492595	0.3995659	0.47146833	0.46461016	0.8904088	1.183578	0.9199795	0.8521722
Glutathione peroxidase	0.46239427	0.6159896	0.6043293	0.7436843	0.7570836	0.893775	0.8007473	0.855991	1.4258842	0.8790452	1.0139817	0.8091804	0.8191062
Phase-1 RCT-239	0.768809	0.8673614	0.7720853	0.75136167	0.734131	0.893775	0.8510758	0.8205971	1.5721075	1.4480371	1.1698519	0.9199795	0.8521722
Phase-1 RCT-57	0.7546827	0.6854554	0.80862504	0.85373805	0.7620895	0.3275909	0.8083125	0.7512672	0.86804625	0.8413165	1.100885	1.0112472	1.1686809
Phase-1 RCT-123	0.6974299	0.9174053	0.856597	0.88342286	0.78854628	0.4250528	0.8653366	0.7028643	1.016654	1.5070183	1.1613839	1.1787408	1.0753994
Calgranulin K2	0.89855856	0.8128288	0.73773164	0.8336886	0.76401395	0.51648337	0.73634857	0.64124525	1.2145693	0.87422943	0.9707061	1.0487693	1.054362
Phase-1 RCT-123	0.81917465	0.7673098	0.84864426	0.8801969	0.8450431	0.8232431	0.9170819	1.0439477	1.2287858	1.1189587	1.1952374	1.0260446	1.0532899
Phase-1 RCT-96	0.6931912	0.74230268	0.8828438	0.9371591	0.8565413	0.6525584	0.7121351	0.84193736	1.1606523	0.8922937	1.165714	1.0260446	1.0532899
Aquaporin-3 (AQP3)	0.7240415	0.7508854	0.78894014	0.9758925	0.8251046	0.74654126	0.76824117	0.92038816	1.3746816	1.0940747	1.201368	1.0418025	1.0130767
Steady-state desaturase, liver	0.8015517	0.11460554	0.05144678	0.030903155	0.025953446	0.069148526	0.08576837	0.1475723	0.81173784	1.0628214	1.2658275	1.18815815	1.0724628
Phase-1 RCT-64	0.6514277	0.7867824	0.6834237	0.69294818	0.62232465	0.3517368	0.42752995	0.5703796	1.4086087	1.0535489	1.1439529	1.0760943	0.8760815
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes=necr,													
necrosis observed; yes=both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 29

Table 29. Expression Data for 24 Hour

Table 29. Expression Data for 24 Hour												
Timepoint (1)												
Compound Dose (2)												
Animal Number (3)												
Liver Toxicity Inflammation Classification (4)												
NAL 45	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	NAL 180	PHEN 20	PHEN 20
2846	2654	2655	2656	2624	2625	2626	2635	2634	2635	2636	1324	1325
no	no	no	no	no	no	no	no	no	no	no	no	no
Gema Name (5)												
Genes-actin, cytoplasmic												
Phase-1 RCT-145												
Gad45												
Phase-1 RCT-178												
Macrophage inflammatory protein-2 alpha												
Fas antigen												
Interferin beta1												
Phase-1 RCT-207												
Aspartate aminotransferase, mitochondrial												
Casest-alpha												
Phase-1 RCT-30												
MAP kinase kinase												
Hepatocyte growth factor receptor												
Phase-1 RCT-27												
Phase-1 RCT-50												
Phase-1 RCT-182												
Phase-1 RCT-37												
Organic cation transporter 3												
60S ribosomal protein L6												
Zinc finger protein												
Calgranulin B2												
Phase-1 RCT-42												
Phase-1 RCT-116												
Multi. hemolysis (MLH1)												
Phase-1 RCT-70												
Sorbitol dehydrogenase												
Phase-1 RCT-24												
Calgranulin B1												
Elongation factor-1 alpha												
L-glutono-gamma-lactone oxidase												
Phase-1 RCT-33												
Clun												
Phase-1 RCT-233												
Phase-1 RCT-39												
Phase-1 RCT-242												
Phase-1 RCT-181												
Phase-1 RCT-185												
Phase-1 RCT-179												
Phase-1 RCT-144												
Phase-1 RCT-225												
60S ribosomal protein L6 (alternate done 1)												
Phase-1 RCT-225												
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Table 28

Phase-1 RCT-49	0.7945655	0.9209793	0.86502243	0.8512035	0.8798802	0.9102153	0.94338106	0.907583	0.9350562	0.8771705	0.8690911	0.8034037	0.91829836
Calgranulin B3	0.8655031	1.1343502	1.1624098	1.1198952	1.1146247	1.1215424	1.1047294	1.2077343	1.2547921	1.1586927	1.1356421	1.3416873	0.9682881
NADP-dependent isocitrate dehydrogenase	1.3686329	0.86421037	0.8876584	1.3459216	1.0789074	0.9925583	1.0859435	1.0299087	1.0402734	1.1657312	0.9270499	0.875138	0.9682881
Cytosolic	0.9108757	0.90483123	0.9503644	0.97358016	0.8810886	0.8738034	0.76401305	0.8513713	0.8147221	0.77693635	1.047764	1.2453977	1.3887161
Oxidant binding protein 1	1.4244733	1.2590571	1.5503533	1.5445105	1.3746221	1.6056002	1.6194117	2.0670911	2.8062227	2.7565466	0.6926256	0.7428868	1.11105
Sodium/bicarbonate cotransporter	1.2211837	1.3744084	1.1512893	1.1512893	1.1708428	1.2375371	1.2164764	1.0908174	1.3211928	1.2176064	1.3816337	1.2487998	1.1853358
Phase-1 RCT-174	1.3584315	1.5434354	1.4633684	1.2127694	1.2088982	1.2127694	1.2417465	1.1326608	1.3705009	1.1484904	1.1920491	1.2801553	1.1853358
Phase-1 RCT-77	1.6571159	1.3102386	1.0063114	0.9853057	0.7667725	0.5840684	0.8404985	0.5786525	0.5647147	0.59387	0.5523267	0.6031051	0.8292021
Inositol polyphosphate multikinas (ipmk4)	1.4509447	1.095916	1.0323667	0.9262251	1.1240284	0.9911421	0.9833345	0.912678	0.87613794	0.8601663	1.1359812	0.8923417	1.1783812
Phase-1 RCT-256	0.6475984	0.48891117	1.0088784	0.6443255	1.0007473	1.0175515	0.7905172	0.95177394	0.8269258	0.9012228	0.60462654	0.59832398	0.5594676
Equitratine nitrobenzylthiolinosine-sensitive	1.3001322	1.3908346	1.2532539	1.1705231	1.1438412	1.0546213	1.1128906	1.1103933	1.052943	1.1110393	0.8423316	0.8845892	0.95642245
CDK102	1.1153713	1.040592	0.9224472	0.97728014	1.0186841	0.9273983	0.1059315	0.8966452	0.8904389	0.8966452	0.8920538	0.9271669	0.9271669
Phase-1 RCT-209	1.7209028	2.0180998	1.2616445	1.18752973	1.0283285	1.3397765	1.076803	1.0737691	1.3701471	1.1937072	0.8248776	0.9000133	0.87077494
NADH-cytochrome b5 reductase	1.1938505	0.9103717	0.8736597	0.8466398	0.9340932	0.8470167	0.8321644	0.81275084	0.87168338	0.8326314	0.98530844	0.8393768	1.1703322
Dynam-1 (D100)	1.4554753	1.1735932	0.9330271	1.3021619	1.058491	0.7967488	0.7541665	0.4704822	0.8826545	0.7312886	0.8409734	0.88550175	0.95328356
Sensuence marker protein-30	1.2382659	1.2584554	1.1476489	0.9698952	1.1533446	1.1540354	1.0218877	0.166272	0.80109338	0.9511349	0.82821878	0.82675143	0.95328356
Phase-1 RCT-49	1.0056091	0.9731419	1.370123	1.0316802	0.925545	0.90541774	0.82283494	1.0245651	0.7816251	0.68705034	1.1185747	1.1188826	1.165801
Camitine palmitoyl-CoA transferase	1.1346719	0.5743935	0.8777937	0.9760137	0.8048048	1.3402883	0.4598147	0.6303273	0.76918085	0.59870154	0.7984272	0.543503	0.8945873
Alpha-2-microglobulin	1.1350039	1.2161075	1.5448645	1.2730693	0.8683826	1.2727754	1.0026091	1.1576259	1.7378314	1.0928464	1.273753	1.2834086	1.0858508
Andiprotein Cili	1.013816	0.6900481	1.196563	1.2324036	1.2727754	1.0026091	1.1576259	1.7378314	1.0928464	1.273753	1.2834086	1.0858508	1.0858508
Phase-1 RCT-141	0.85472214	1.1027671	1.301691	1.1605105	0.97789705	1.3882618	1.1688918	1.173028	1.2451423	1.3781716	1.3488929	0.7546521	0.8611524
Phase-1 RCT-289	0.7743734	0.7587664	0.8223207	0.9520162	0.8166723	0.80650934	0.9355887	0.9452087	1.1037155	1.0017846	1.0508366	1.081898	0.9528697
Endothelin-1	0.7181182	0.77797943	0.8323851	0.88758045	0.8727978	0.8693042	0.97701305	0.8783103	0.90428644	0.87176944	1.0488828	1.1757902	1.0438749
Phase-1 RCT-140	0.74846727	0.8557865	0.92466724	0.888537	0.9932946	1.0426621	0.88876196	1.087528	1.112782	1.047831	1.4798464	1.6099744	1.2489476
Cylin D1	1.1392248	1.0189381	0.9382328	0.90173568	0.85583687	1.3334715	0.810279	0.8791432	1.029711	0.948071	1.0222385	0.8662885	1.1794013
Phase-1 RCT-287	1.1345635	1.0715378	1.209328	1.0680703	1.0206739	0.93373746	0.99131024	1.0689512	1.0697343	1.0686355	1.0213088	0.177569	1.0925852
Phase-1 RCT-281	0.8663582	0.7514614	0.7959658	0.9500297	0.87402076	0.78604854	0.85984885	1.0449101	0.86184458	0.80492526	0.8686259	0.72034657	1.138473
Retinol-binding protein (RBP)	1.4078014	1.2007042	1.4362344	1.2256008	1.6549897	1.4533019	1.4000489	1.4012564	1.2751522	1.2077728	0.7324525	0.5837064	0.5837064
ATP-stimulated guanylate cyclase	0.3059378	0.76410506	0.8749573	1.098866	0.5812655	0.87220436	0.7628155	0.65278806	0.60577834	0.7872022	0.71406204	0.9527085	1.244368
Transcription promoter (Glx)	0.83353355	1.2022501	0.9339825	1.005981	1.091844	1.4330581	1.2039861	1.173727	1.5056885	1.3216424	0.80483903	0.8575163	1.0326198
Phase-1 RCT-60	0.89368564	1.0719592	1.177124	1.198789	1.0906881	1.3283389	1.2355403	1.0551441	1.328807	1.16781	1.0669962	1.1577378	1.0657641
Pyruvate kinase, muscle	0.8200094	0.9944221	1.0216209	0.9518735	1.0961228	1.2537847	1.2469721	1.1956041	1.4318604	1.205457	0.9709304	0.9268347	0.9118869
PAR interacting protein	0.748705	0.7933130	0.9347583	1.2246327	1.0655922	1.2703601	1.2078403	1.3596091	1.2880648	1.3621202	1.0987982	1.1689166	0.8403223
Nucleotide diphosphate kinase beta isoform	0.98801035	0.9995397	1.0339845	0.9757027	0.8928386	1.0129519	1.0114967	1.0078114	0.9880363	0.97384363	1.0868754	1.0849292	0.9884324
Gad6153	0.8996103	0.9143368	0.904818	1.121623	1.2334747	1.726878	1.3567576	1.5138423	0.49048477	0.5621914	0.5075451	0.43073258	0.43073258
Insulin-like growth factor binding protein 1	0.8715734	1.1644638	1.2457168	1.4055188	1.0401475	0.8755015	1.026089	1.1414586	1.1798166	1.266216	0.8798327	0.7846387	0.9970922
c-H-res	0.9146696	0.5723575	1.0113008	0.860556	1.0506246	0.98989516	0.80907696	0.7482172	0.78544824	0.81821836	0.5527215	0.50914973	0.52591175
N-hydroxy-2-acetylaminofluorene	1.3536246	1.417802	1.2474116	1.4187208	1.5976675	1.9553388	1.5744613	1.4439588	1.6665143	1.4216216	0.91740453	0.8369561	0.83249515
saliviferase (ST1C1)	1.541386	1.018812	0.7721893	0.7586903	0.6585815	0.5583438	0.81498027	0.58555424	0.49048477	0.5621914	0.5075451	0.43073258	0.43073258
Alpha 1 - inhibitor III	1.2379519	1.191926	1.2698579	1.1322235	1.1813262	0.97653945	1.1554247	1.1404034	1.164246	1.1802863	1.1992493	1.5260287	1.8360548
Sterol carrier protein 2	0.58262235	0.7021413	0.7211879	0.6492753	1.1219102	1.2482643	1.2512108	1.1947898	1.030753	1.0578291	1.2896171	1.3252044	1.3252044
Organic anion transporter 3	0.6525714	0.77884305	0.74583155	1.0481452	1.2375424	0.850613	1.0269765	0.8342451	1.4075532	1.105812	1.0096425	0.8956276	0.9877735
Calgranulin B4	1.189788	1.3530902	1.4229779	0.9246028	1.2028779	0.89879507	0.91734315	0.91231155	1.0689304	1.0050188	0.8953493	0.88361394	0.6138840
Phase-1 RCT-182	1.3114224	1.3213589	1.3240888	1.0204314	1.1412052	0.8988454	0.88117486	0.99461704	1.0927898	0.8679478	0.920213	0.8445824	1.2120534
Calgranulin B8	1.2397252	1.5086234	1.328086	1.1989886	1.2720841	1.1315608	1.0542352	0.8687573	1.1255652	1.047859	1.1007298	0.9458294	1.2120534
Aldehyde dehydrogenase, microsomal	1.3877952	1.0944243	0.9140059	0.8328923	0.8580888	0.7364319	0.74167824	0.93203835	1.0133567	0.94094044	0.9879366	0.8464645	1.2120534
Phase-1 RCT-128	0.7889429	0.6539396	0.7060307	0.7161397	0.8732523	0.6239475	0.6547211	0.7132512	0.4782684	0.5207925	1.0955093	0.987624	0.73896307
Phase-1 RCT-102	1.5018861	1.1314883	1.0357842	0.9416698	1.0833417	0.8501017	1.0541462	0.82084027	0.7142619	0.6782413	1.1954731	0.91284853	1.011237
Preproalbumin, sequence 2	1.2568711	0.8907495	0.9307453	0.9188236	0.86406846	1.0082976	0.8601176	1.0071471	0.8300611	0.82503843	0.6454121	0.7367873	1.1731334
Acidophorin A1	1.2637637	0.7715077	1.0462343	0.965112	1.1803931	0.965112	0.965112	0.965112	0.965112	0.965112	0.965112	0.965112	0.965112
Phase-1 RCT-10	1.005092	1.2905044	1.4563944	1.4284807	1.1949213	1.0438403	0.8561277	0.64067954	0.7973062	0.7094181	0.8433447	1.3895514	1.2015344
Phase-1 RCT-48	1.4841201	1.1909412	1.1103846	0.9820308	0.8300484	0.7845645	1.0097238	0.81403923	0.7211475	0.6703909	1.1427878	0.92593813	1.1278162

Table 29

Phase-1 RCT-168	1.2298381	1.2343104	1.1068872	1.072905	1.2174448	1.1077245	1.3561	1.0874873	1.1549605	1.1103178	0.8115332	0.7760997	0.8228663
Phase-1 RCT-169	1.1861619	1.1855594	1.07521	1.1038438	1.0823878	0.9628561	0.916701396	1.1676247	0.89513135	0.8890816	1.2805486	0.7760997	0.8228663
Beta-epsilon synthase	1.6305613	1.5325068	1.9328371	1.1337548	1.3225758	0.9006729	0.59286244	0.8334815	0.8807234	1	1.6769481	1.2011054	1.2011054
Phase-1 RCT-208	1.4291129	1.042628	1.0991402	0.90280015	1.0508249	1.2468704	1.4246466	0.8164644	0.8602003	0.8602003	0.8602003	0.8602003	0.8602003
Carbonic anhydrase III	1.2987891	0.2898872	1.5152373	0.98763746	1.4814453	1.4555666	0.83107202	1.5912727	0.6881851	0.8602003	0.8602003	0.8602003	0.8602003
Phase-1 RCT-291	1.237645	1.1813105	0.95176506	0.98763746	1.4814453	1.4555666	0.83107202	1.5912727	0.6881851	0.8602003	0.8602003	0.8602003	0.8602003
Carbonic anhydrase III, sequence 2	1.3050999	1.383947	1.3235956	1.1147693	1.3169941	1.35719628	0.98400314	1.204021	0.7539638	0.8602003	0.8602003	0.8602003	0.8602003
Phase-1 RCT-271	1.3056396	1.0358433	0.9519078	0.8556978	1.688782	1.3719628	0.98400314	1.204021	0.7539638	0.8602003	0.8602003	0.8602003	0.8602003
HMG-CoA synthase, mitochondrial	0.8973875	1.0334107	0.91172624	0.8758581	0.96701251	0.96701251	0.96701251	0.96701251	0.96701251	0.96701251	0.96701251	0.96701251	0.96701251
Phase-1 RCT-189	1.2686024	0.9871813	0.8433522	1.042628	1.0743564	1.2163238	0.970393135	0.68479574	0.7077478	0.8602003	0.8602003	0.8602003	0.8602003
Phase-1 RCT-40	1.0793378	1.0011651	1.3385983	1.162832	1.0743564	1.2163238	0.970393135	0.68479574	0.7077478	0.8602003	0.8602003	0.8602003	0.8602003
Paraoxonase 1	1.2734405	0.7374738	0.7437181	1.169237	0.8875009	0.90776366	0.7913593	0.8649714	0.7219137	0.831534	0.96701251	0.96701251	0.96701251
Liver fatty acid binding protein	1.065481	1.4900931	1.010262	0.824068	1.2483753	1.1088895	0.7913593	0.8649714	0.7219137	0.831534	0.96701251	0.96701251	0.96701251
Phase-1 RCT-38	1.4709683	0.8678139	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966	0.7630966
Phase-1 RCT-270	0.99800235	1.2422948	1.1992775	0.9196034	1.1550723	0.862422	1.020835	0.9343709	0.9343709	0.9343709	0.9343709	0.9343709	0.9343709
Hepatic lipase	1.11714	0.7437439	0.80211073	0.5170425	1.1200944	0.69979334	0.9047116	0.7302418	1.207551	0.6738386	0.54411507	0.4930248	0.45010105
Cytochrome P450 11A1	1.0846782	1.3403656	1.1256481	1.050906	1.1132842	0.82422	1.0283131	0.86809924	0.8195775	0.8353518	0.8353518	0.8353518	0.8353518
Phase-1 RCT-175	1.5651836	1.4553739	1.256481	1.050906	1.1132842	0.82422	1.0283131	0.86809924	0.8195775	0.8353518	0.8353518	0.8353518	0.8353518
Phase-1 RCT-117	1.4949468	1.2344115	0.9959894	0.890188	1.306499	0.7925805	1.1141845	0.8439035	0.92508645	0.88174003	0.42763156	0.42931503	0.4968751
Melanoma-associated antigen ME491	1.3095828	0.9572113	1.2668872	1.3903663	1.1284412	0.924978	1.190656	0.081837	0.9854227	1.0451078	0.8841422	1.0709833	1.0573464
Phase-1 RCT-152	0.9246583	1.1237488	1.0929352	1.1073781	1.4516833	1.3002393	1.3002393	1.170492	1.219827	1.3953617	1.1255708	1.0801247	1.4226772
14-3-3 zeta	0.8702546	0.7000481	0.57559103	1.4334339	0.9007466	1.0910873	1.0417897	1.1135688	1.1095283	1.2457852	0.78583473	0.7084762	1.0087266
Cytochrome P450 2C23	1.7178463	0.9776241	0.8742682	0.9040521	0.8912418	0.45116067	0.7558584	0.4624288	0.4624288	0.4624288	0.4624288	0.4624288	0.4624288
Voltage-dependent anion channel 2 (Vdac2)	1.078925	1.2125319	1.266039	1.1866448	1.3035039	1.4937694	1.2329986	1.2834397	1.3901386	1.3733089	1.3733089	1.3733089	1.3733089
Phase-1 RCT-164	0.92725456	1.8818855	1.1567302	1.2157241	1.1086146	1.093738	1.1250215	1.3025905	1.1715695	0.9325646	1.0804428	1.00637	0.93843764
Superoxide dismutase Mn	1.1920233	1.6315763	1.7566872	1.1765287	1.2513832	1.0321606	1.2563678	1.3203067	1.4159875	0.924224	1.1141188	1.2153718	1.2153718
Phase-1 RCT-106	0.89453975	0.128802	0.9801688	0.80479836	1.2830084	0.77013445	1.0558498	0.7591386	1.2340048	1.1414587	0.8603114	0.8603114	0.8603114
Cystin G	0.9947704	0.9966421	1.1876214	0.90598124	1.0151032	0.8525351	0.8787688	0.97389543	1.1855682	1.1195031	0.8376947	0.54823047	0.849816
Calgranulin B5	0.8504884	0.84553828	0.8553519	0.81272028	1.0716777	1.0735875	1.0406235	0.99924064	1.0332025	1.0732217	1.0604428	1.1795504	1.5394915
Phase-1 RCT-205	0.8817756	0.77154285	0.8398684	0.86125016	1.1250507	1.245530	1.0737144	0.843917	1.2458733	0.8729443	1.0674282	1.1948479	1.1559552
Phase-1 RCT-68	0.92837083	1.0328423	0.7023249	1.0500108	1.0722578	1.0791684	1.0797226	1.1488855	0.461162	1.2031827	1.506034	1.338087	1.338087
Caspase 3	0.74509288	0.809818	0.7463178	0.95816493	1.0469722	0.9988617	1.111024	0.85983028	0.9351881	1.0423728	1.0851798	1.524761	1.3844845
Alpha-tubulin	1.1133396	1.1013197	1.1107408	1.1440805	1.3011595	1.3012289	1.3099027	1.2545498	1.5243458	1.402197	1.5845944	0.954512	0.9683165
Phase-1 RCT-39	0.870792	1.63307	1.3045912	1.3455081	1.0750833	1.008143	1.1759188	1.208638	1.1272885	1.2862722	1.0524868	1.073528	1.2812889
IgE binding protein	0.88144374	1	1.5603224	1.9054789	0.9298123	0.8924658	0.91136533	0.9373365	0.83738874	1.0133716	1.0982597	1.1659347	1.1215387
Collin	1.3518732	1.3017913	1.242821	1.2494075	0.901139	0.8266225	0.9116556	0.9113568	0.83585313	0.86267895	1.074618	0.9685963	1.2153522
Heme oxygenase	1.315685	1.5888879	1.8892838	2.8861155	1.0987487	0.8438345	0.93153197	0.7678747	0.75536895	0.8648719	1.4980029	1.8076307	2.435522
Phase-1 RCT-241	0.6891209	0.7310888	0.7531202	0.93108824	1.0452049	1.0585343	1.0618383	1.2851393	1.2832461	1.3451	1.1097968	0.9687293	0.8213983
Ribosomal protein S9	1.3957795	1.309577	1.485553	1.4182341	1.2602167	1.202473	1.3338516	1.023035	1.331908	1.3280592	0.89744384	0.8325258	0.5839838
Phase-1 RCT-258	0.91884818	1.1397035	1.2400519	1.0304075	1.0931863	0.761275	1.0058142	1.0942019	1.1273836	1.0474205	1.0526546	0.968706	1.0177028
Argininosuccinate lyase	1.1505351	1.3509878	1.2208346	0.94724215	0.8459808	0.8847442	1.0417393	0.8355841	0.780508	0.86091406	0.67640903	0.9913922	1.0997481
Phase-1 RCT-180	1.2443647	1.1695856	1.1770552	1.1910163	1.2780552	1.2404368	1.0655331	1.2857443	1.1864618	1.0166707	0.9865005	1.0710053	1.0710053
Multidrug resistant protein-1	0.8513599	1.368165	1.7795007	0.93782674	1.5768877	1.1858297	1.3839293	1.458121	1.3789705	1.2529205	1.7073212	1.457863	1.457863
Oxidative decarboxylase	0.964625	1.2021352	1.2125236	1.1312873	1.1725769	1.2528758	1.0988859	1.2822033	1.29426	1.1606983	1.2117712	0.7194878	0.7559305
Thymosin beta-10	1.011787	1.549872	1.8271819	1.3810022	1.0041044	0.9050592	1.065077	0.9642861	0.8766281	0.9673985	1.1071659	1.1823589	1.490472
Phase-1 RCT-72	0.79373257	0.828669	0.8670422	0.9063326	1.4427398	1.3917104	1.3759535	0.9037385	0.927324	1.0347741	1.2090583	0.8948181	0.99830157
Phase-1 RCT-109	1.0459568	1.1812588	1.2336867	1.3265098	1.086216	0.9635175	1.181331	1.0727324	0.9476148	0.9685648	0.99958025	0.62672836	0.7535947
Phase-1 RCT-76	0.817163	0.6621892	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244	0.85160244
Vacuole membrane protein 1	1.0860022	0.8780693	1.1242611	0.98874166	0.88226678	0.92202955	0.87202089	0.7380668	0.87699276	0.71151376	0.5560013	0.43387903	0.63718545

Table 29

Phase-1 RCT-158	0.7358871	0.8807951	0.8109457	0.81441715	0.92686238	0.9850338	0.8903373	0.948098	0.9942084	1.009493	1.054662	1.078632	0.8978081
Phase-1 RCT-113	0.9000228	0.83981574	0.89869656	0.94673026	0.8718956	1.0485766	0.97104496	1.0543324	1.0765477	1.0519762	0.9181402	1.0135715	1.0980237
Endogenous retroviral sequence, 5' and 3'	0.56552345	0.62844804	0.6663977	1.8134204	0.8051625	0.8944769	0.7615338	1.2096317	0.7010698	0.7797112	1.1968359	1.1039474	1.257189
LTR													
Beta-actin	0.7401255	1.1042328	0.8703842	1.0229883	0.7157172	1.3100652	1.0077792	1.2239356	1.2457637	1.1447319	1.3180724	1.3470838	1.7217063
Phase-1 RCT-65	0.9606985	1.1371081	0.8500738	1.0763657	0.96349233	1.2357286	1.051156	1.1214749	1.1223944	1.09478	1.064753	1.1683969	1.1685802
MHC class I antigen RT1.A1(f) alpha-chain	0.9128695	1.4849708	1.5554982	1.1489924	1.1439785	1.4196293	1.2892746	1.020721	1.018965	1.1397719	1.3246568	1.0519766	1.2566889
Bax (alpha)	0.8780714	1.1074398	1.1316492	1.026578	0.84889754	1.2040212	1.0290688	1.0570376	1.0612734	1.1220024	1.1137072	1.146189	1.3624527
Carbonic dehydratase	1.0682318	1.0359313	0.95573765	0.98551985	0.9584668	0.96134573	0.91597694	1.0586959	1.1249553	0.96204	1.0129995	1.0348394	0.74953217
Beta-actin sequence 2	0.8034704	1.1387154	1.0333424	1.2497374	1.0894217	1.1448286	1.0336694	1.0109838	1.0595994	0.98806804	1.0289162	1.0217551	1.2001052
Interleukin-10	0.7948811	0.9813978	0.8707514	0.9777113	0.8046282	1.0216693	1.1310612	1.1134707	0.94676745	1.0502825	1.299325	1.1897255	1.1789443
Phase-1 RCT-181	0.8401624	1.0542101	1.0555668	0.9455711	1.2281837	1.5182964	1.2914625	1.4284293	1.5989642	1.3647133	0.63189214	0.7151828	0.9685746
Phase-1 RCT-111	0.9198883	0.8227721	0.79570065	0.8178414	1.0004549	1.0169792	0.997374	0.9587112	0.8683787	0.88504483	0.7502869	0.78443235	0.9007217
Apoptosis-regulating basic protein	1.2431304	0.8936587	1.1118445	0.96937853	0.92151004	0.89403087	0.8205674	0.7273818	0.89527068	0.7054835	0.7502869	0.78443235	0.9007217
Glutathione peroxidase	1.518813	1.6229451	1.1123204	0.85060704	1.2445888	0.94034284	1.5200868	1.0379813	1.0393149	1.2908771	0.83408314	1.1503637	1.1137137
Phase-1 RCT-239	0.79097927	0.87950238	0.854141	0.73717433	0.75508027	0.9364927	0.8651457	0.80338484	0.8918194	0.9092693	1.0483355	1.0119119	1.0177392
Phase-1 RCT-47	1.1739448	1.1134593	1.2097906	0.8658947	0.8380758	1.0109698	0.8704788	0.84253916	0.94219184	0.594977	1.2344102	1.3399453	1.2839687
Tyrosophan hydroxylase	0.82442863	0.8727916	0.8658947	0.81134782	1.143666	0.9147895	1.197387	0.705368	0.8943264	1.1285589	1.1293199	1.4611645	1.4958245
Sulfoltransferase K2	0.78442835	1.63028187	1.2312864	0.8440246	0.8250504	0.9372327	0.8541368	0.8384208	0.9371893	0.8904729	0.9584444	0.94085	0.93461883
Calgranulin B9	1.076592	1.1528497	1.2312864	0.8440246	0.8250504	0.9372327	0.8541368	0.8384208	0.9371893	0.8904729	0.9584444	0.94085	0.93461883
Phase-1 RCT-123	0.8051793	0.6988335	0.857286	0.8440246	0.8250504	0.9372327	0.8541368	0.8384208	0.9371893	0.8904729	0.9584444	0.94085	0.93461883
Phase-1 RCT-98	1.0624834	0.92400557	0.70015645	0.8250504	0.8250504	0.9372327	0.8541368	0.8384208	0.9371893	0.8904729	0.9584444	0.94085	0.93461883
Aquaporin-3 (AQP3)	0.9177595	0.80286753	0.861768	0.8440246	0.8250504	0.9372327	0.8541368	0.8384208	0.9371893	0.8904729	0.9584444	0.94085	0.93461883
Stearoyl-CoA desaturase, liver	0.880401	0.14997302	0.09074888	0.09381872	0.6512865	0.62645817	0.4304683	0.34804508	0.708729	0.09759399	0.3057141	0.27387893	0.1961258
Phase-1 RCT-64	1.38886623	1.2088335	0.97263118	1.0089219	1.2650424	1.2913185	1.2294636	1.1242884	1.3558815	1.1200256	1.1097777	1.1889122	1.2397716
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-no, necr,													
necrosis observed; yes-no, necr, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 29

Table 29. Expression Data for 24 Hour													
Timepoint (1)	PHEN 80 1334	PHEN 80 1335	PHEN 80 1336	PEG 5000 144	PEG 5000 145	PEG 5000 146	PUR 38 24	PUR 38 25	PUR 38 26	PUR 150 34	PUR 150 35	PUR 150 36	QUIN 25 2544
Compound-Dose (2)	no	no	no	no	no	no	no	no	no	no	no	no	no
Animal Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	0.7751247	1.0170078	0.8968741	0.65441525	0.7689974	0.9265812	1.284973	1.1303768	0.87413156	0.86734083	0.9633074	0.9023388	0.612314
Gamma-actin, cytoplasmic	1.5420861	1.2157737	0.94032466	0.918947	0.9606311	0.9616887	0.81447935	0.8864563	1.0455493	0.9726524	0.88756204	0.9633934	0.9849822
Phase-1 RCT-145	1.6145211	2.2344658	1.8680181	1.263874	0.8794356	1.018031	1.2352792	1.0358149	1.0425459	0.713086	1.0560709	1.250975	1.0538925
Gd4045	0.94829553	0.8759224	0.96331453	1.070189	0.8784167	0.8374993	1.08451	1.3102221	1.0358194	0.9833112	1.178431	1.2139638	1.0527768
Phase-1 RCT-78	1.6840334	1.4177894	1.2209109	1.1484953	1.0751884	1.075027	0.6808766	0.7643318	0.8229191	0.8949409	0.9425469	0.8752446	1.1568498
Fas antigen	2.0506077	1.8953089	2.7863204	1.796844	1.3984765	1.057463	1.225336	0.9602098	0.9620253	0.8267536	1.0913934	1.2430882	1.0232733
Macrophage inflammatory protein-2 alpha	1.7935729	1.9782509	2.031476	1.542117	0.88766295	0.923847	1.2508307	1.0350007	1.0403031	1.0496986	1.209287	1.1358478	1.0504164
Integrin beta1	1.5985005	1.4324657	1.3211188	1.064761	1.0537797	1.051076	1.0481902	1.1350007	1.1648784	1.0713575	1.021827	1.0719141	1.0534931
Phase-1 RCT-207	0.9589811	0.9376761	0.62533134	0.8080773	0.9120949	0.77953728	0.980003	1.1648784	0.9948743	0.94317526	1.0719141	1.0534931	1.0534931
Aspartate aminotransferase, mitochondrial	2.2045033	2.350422	1.059634	1.4984455	1.3797518	1.160755	1.0266591	0.9797704	0.9629576	1.1333954	0.84050554	0.7150414	0.90680715
Caselin-alpha	1.3576767	1.3981359	0.981408	1.2713785	1.024414	0.8232835	0.9031559	0.9353328	0.9629576	1.1333954	0.84050554	0.7150414	0.90680715
Mallo enzyme	0.5430728	0.601803	0.4629801	2.8976631	1.1244067	0.9144617	1.7900468	1.6891152	1.8457768	2.216333	0.7097603	0.7623493	1.0928882
Phase-1 RCT-30	1.2143216	1.1496822	1.512188	0.9143418	0.9957587	1.02166	1.142854	0.9516687	0.88705504	0.8570927	0.9784588	0.8773995	1.081031
Hematoxylin growth factor receptor	1.1025667	1.688882	0.9146814	0.9365872	1.082365	0.8880206	1.8790008	1.6040045	1.6616168	1.2285558	2.1555626	1.575178	0.57078185
Sodium/glucose cotransporter 1	0.42221444	0.38136488	0.4059424	0.8917884	1.092365	0.6472337	0.43073025	0.43880147	0.8140817	0.71485578	0.75781234	0.62603205	0.8112609
Phase-1 RCT-27	1.1314412	1.2156872	1.7804258	1.3114128	1.1255213	0.6472337	0.43073025	0.43880147	0.8140817	0.71485578	0.75781234	0.62603205	0.8112609
Phase-1 RCT-60	1.5447168	1.4955015	1.4834608	1.2872071	1.1848814	1.1412555	0.9881178	0.95027095	0.8360948	0.9334133	0.8471289	0.8022142	0.894142
Phase-1 RCT-192	0.9048307	0.7248219	0.9280826	1.0515157	1.07637	1.1334774	0.83139033	0.92597978	0.9117199	0.708823	0.92778647	0.76523233	0.9853258
Phase-1 RCT-288	0.78683826	0.8168164	0.9145325	1.1487776	1.2766461	1.5762904	1.0958738	1.0116683	1.1496897	0.9730313	1.3232245	1.180365	0.9002472
Phase-1 RCT-37	1.3757353	1.2542653	1.316131	1.2276284	1.0963138	1.0376618	1.0804435	0.89931898	1.018497	0.9730313	1.3232245	1.180365	0.9002472
Organic cation transporter 3	0.65236734	0.7018866	0.83572125	1.1851823	1.0781773	1.0039755	1.0945142	1.000431	1.0448604	0.9576212	0.8500898	0.8338518	0.8741769
GUS ribosomal protein L6	0.65510886	0.7346333	0.82743186	1.0071105	0.9131455	0.9945142	1.0945142	1.000431	1.0448604	0.9576212	0.8500898	0.8338518	0.8741769
Zinc finger protein	0.70276255	0.59933485	0.70821794	1.167741	1.133443	1.2241341	0.7768126	0.9931216	1.1407169	0.9537212	0.8500898	0.8338518	0.8741769
Cdkgrin B2	0.8557577	0.9537554	0.9278324	0.8941927	0.8953645	0.9057373	1.218803	1.1216285	1.173063	1.0845337	1.0774144	1.0475897	0.84018914
ID-1	1.3105171	1.6738773	1.3931935	0.8917427	0.82168344	0.71159065	1.0344301	1.0343043	1.0095189	1.1340371	1.2304094	1.5456824	1.0428363
Phase-1 RCT-92	0.53692865	0.63860485	0.8958713	0.8470675	0.8005772	0.8987079	0.742874	0.8431694	0.99161273	1.1340371	1.2304094	1.5456824	1.0428363
Phase-1 RCT-115	1.8428685	2.598575	1.9163446	0.9593435	0.8073111	0.8942828	1.3238013	1.1379579	1.1654859	1.163282	1.4217008	1.684145	1.1417449
Meirin F/G	1.005843	1.2818294	0.8953324	0.9875332	0.87949857	1.121496	1.0897698	1.1390699	1.1637571	1.0919104	1.3273002	1.1794827	0.9652686
Meirin F/G	0.80492204	0.7805151	0.79822524	1.081101	1.2240592	0.9505133	1.2898413	1.1200403	1.079242	1.031585	1.269305	1.2527112	0.9008151
Meirin F/G	1.495992	1.9371592	1.2632524	1.0186112	0.944882	1.1675947	1.1223699	1.0800655	1.030518	0.9509453	0.94308174	0.9853438	0.8895188
Phase-1 RCT-79	0.8542045	0.73847028	1.1704977	0.83211536	0.52822726	0.6469649	0.8256768	0.8751089	0.83014554	0.8068567	1.1668607	0.92042494	1.3827358
Sorbitol dehydrogenase	1.6527681	2.640336	2.0517508	1.1320143	0.80772038	0.8227103	0.8608571	0.95450675	0.98278594	1.1140468	0.87940115	0.84183594	1.0561428
Phase-1 RCT-24	1.1109432	1.310613	1.2366022	0.87741124	0.85958654	0.8635012	1.1749501	1.0180053	1.158545	1.0782818	1.2481483	1.1628058	0.9415951
Calgranulin B1	0.4718441	0.6250872	0.57667038	0.8571163	0.794383	0.8054492	0.8334774	0.92168415	0.8782847	0.9707161	0.9287175	1.2017705	1.495081
L-glutamate-gamma-lactone oxidase	0.96863867	0.8881233	0.92483485	0.8771114	0.85958654	1.0858663	0.77488035	0.874375	0.82080954	0.8284946	1.225888	0.9836854	0.8522121
Phase-1 RCT-33	0.9435668	1.198707	1.2215228	0.80096484	0.8901848	0.83245274	1.1534694	0.9093273	1.2379414	1.2679117	0.8740998	0.9569147	0.9823036
C-Jun	1.5657839	2.1558005	1.9255353	0.9425645	0.74404895	1.050765	0.94653016	1.0390095	1.2379414	1.2679117	0.8740998	0.9569147	0.9823036
Phase-1 RCT-233	0.89004024	0.7040316	0.8030351	0.89258828	0.74404895	1.050765	0.94653016	1.0390095	1.2379414	1.2679117	0.8740998	0.9569147	0.9823036
Phase-1 RCT-38	1.0869293	1.1415285	1.2738779	0.78011966	0.8378728	0.9138964	0.822591	0.8774204	0.8086821	1.1700587	0.91766754	0.90028104	1.0077785
Phase-1 RCT-242	1.4703559	1.8158729	1.3518225	1.3978821	1.4233374	0.90082717	0.98456484	0.9700783	1.0478485	1.0485517	0.9553069	0.87127938	0.8215926
Phase-1 RCT-181	0.7146683	0.7412876	1.0285153	0.8608195	0.9387358	1.0020168	0.7300708	0.8744831	0.8898559	1.1257962	0.87465304	0.7705818	1.0240157
Phase-1 RCT-185	0.5531054	0.44365102	0.6615876	0.71929417	0.6009344	0.7859274	1.2947125	1.3388831	1.251327	1.2782363	1.197867	1.1729552	0.8063707
Phase-1 RCT-179	0.83123354	0.88761255	0.73424894	0.8977846	0.94430035	1.1158607	0.9466725	1.09673	1.024205	0.880721	1.0577989	1.0919953	0.8678042
Phase-1 RCT-144	0.1797089	1.1178547	0.8418925	0.8910268	0.92803174	0.87882325	0.94366025	1.09673	1.024205	0.880721	1.0577989	1.0919953	0.8678042
IRB-a	0.91175208	0.81684428	0.653571	1.0033299	0.9501904	0.9540928	0.8096273	0.8581718	1.184879	1.1036737	0.86157626	1.1270441	0.9828684
Phase-1 RCT-225	0.77902836	0.830526	0.83379024	0.8579274	0.83964678	0.8355924	1.1244752	1.135809	1.077397	1.218027	1.0403662	0.91201353	0.82749288
60S ribosomal protein L6 (allamale clone 1)	1.094539	0.948311	1.1348211	0.985401	0.8684298	0.945421	1.0044655	1.0035568	1.111387	1.1600725	1.2037074	1.0045232	0.91130894
Beta-tubulin, class I	0.9053487	1.041209	1.5332226	0.9806273	0.7412758	0.6040449	1.100314	1.0975437	1.0962585	1.3462931	1.2587037	1.0853671	0.91883874
Multidrug resistant protein-2	1.4736779	2.493568	1.4167848	0.7647978	1.1643655	1.0887889	1.0802869	0.8333289	0.6475833	0.6936478	1.2824144	1.3631281	0.88072717

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Phase-1 RCT-49	0.30040694	1.0987226	1.0332848	0.9786387	0.98418114	0.9883083	0.83815047	0.85741147	1.0312035	1.0262363	1.0053183	0.9464631	0.98910654
Calgranulin B3	1.6787869	1.5124265	1.3987817	1.1620291	0.984681	1.0012827	0.95930374	0.8469502	0.94154066	0.97907186	0.94154066	1.29126	0.97302085
NADP-dependent isocitrate dehydrogenase, cytosolic	0.6836266	0.77788374	0.76291224	0.9667488	1.128956	1.258422	0.9543355	1.0812526	1.1611418	1.1026538	1.3528653	1.1480398	0.9608564
Oxanone binding protein 1	1.1796796	1.6281503	1.2903521	1.0973136	0.9257527	0.92474145	1.2860889	1.1625785	1.0539407	1.2785635	0.97650863	1.1652224	0.9456235
Sodium/bicarbonate cotransporter	0.42440224	0.49488822	0.5249808	0.5920073	0.9208087	1.2590373	1.1133784	1.2177778	0.9549348	0.84891737	0.44539407	0.43020445	0.84064968
Phase-1 RCT-174	0.7624808	0.6515352	0.9565085	0.9624036	0.9710325	1.014865	1.233394	0.9885258	1.282748	1.3712542	1.2548008	1.0087531	1.0428594
Phase-1 RCT-177	0.76186424	0.58034194	0.89679736	0.8499015	0.888875	1.0042133	1.0601913	0.9597565	1.4111169	1.4853321	1.1744456	1.0122144	1.0027592
Inositol polyphosphate multikinase (tmk4)	0.65068805	0.46829718	0.79105216	0.7868913	0.7855412	1.0590344	1.2500962	1.2125511	1.2181921	1.3142874	1.1579235	1.0466624	0.8563345
Phase-1 RCT-256	1.1059732	1.1464418	1.088121	0.7778016	0.8039603	0.8658218	0.9705028	0.9894408	1.2411373	1.1835526	0.94320033	0.7713162	0.98353884
Equilibrative nucleoside/nucleoside-sensitive	0.52561474	0.6549604	0.6002755	1.0304985	1.0830164	0.86882175	1.1053175	0.98312056	0.8751978	0.6500309	0.9205711	0.7264434	0.9230086
CDK102	0.9991682	1.1521218	0.89821778	0.9878988	0.959992	0.9726408	1.1682565	1.1709025	1.1038792	1.1247188	1.1768428	1.1413273	0.9769552
Phase-1 RCT-209	0.77176684	0.6123634	0.7761478	0.9978191	1.1623949	1.4310978	1.1133968	1.1739988	1.0683989	1.4700807	1.2804309	0.97522488	0.97522488
NADH-cytochrome b5 reductase	0.71081245	0.6755267	0.68508214	0.6391691	0.8749484	1.455985	0.9653674	1.2268115	1.4515638	1.4101257	1.1056729	1.066221	0.8517874
Dynamin-1 (D100)	0.7426757	0.61743206	0.74121965	1.0895035	0.8601084	1.1260041	1.2631251	1.4042483	1.4518655	1.4037815	1.1441544	1.2282658	0.9602487
Sensescence marker protein-30	0.525519	0.42270795	0.9330963	0.91426545	0.7294056	0.8628812	1.250164	1.4567488	1.1480064	0.7115148	1.4083827	1.0917314	0.8071643
Phase-1 RCT-89	0.7403539	0.4825655	0.7285291	0.9235927	1.0681058	1.1811488	1.0716478	0.9623397	1.1261408	1.0327787	0.9030214	0.89048528	0.914287
Carbonyl palmitoyl-CoA transferase	1.8709424	1.8197894	1.5115345	1.3359747	1.2053642	1.2181748	0.8613408	0.9037306	0.8579229	1.0202721	0.8405515	0.8399287	1.1546395
Alpha-2-microglobulin	0.41066796	0.29802874	0.500155	0.8891255	0.6129781	0.8370444	0.6339327	0.9214575	0.825944	0.7799778	0.91434634	0.87306568	0.8813275
Apolipoprotein CIII	1.1424757	1.0567625	1.0036025	0.8377446	0.7286086	0.8652024	0.9434256	0.8333514	0.8333514	0.7649889	0.7822568	0.75123125	1.150836
Cathepsin L, sequence 2	0.555082	0.8699882	0.8164406	0.8812172	1.0352339	1.1032578	1.1170532	0.87318325	0.96134406	0.6753056	1.6068571	1.4191232	0.86555883
Phase-1 RCT-141	1.7052307	1.3965636	1.4972514	1.6501378	2.1751804	1.7028951	0.9483875	0.82340705	0.8118818	0.9084335	0.8827328	1.2979517	1.0544388
Phase-1 RCT-288	0.8248044	0.5687734	0.5234442	0.92078924	0.76412804	0.85491127	0.82542338	0.9454408	0.8233009	1.0151608	0.70844823	0.86677983	1.03377
Endothelin-1	1.7658661	1.8514292	1.5456232	1.2818987	1.0728978	1.2759022	1.057371	0.9660257	1.0721602	1.1153284	1.2753117	1.0153232	1.0153232
Phase-1 RCT-282	1.4923133	1.775318	1.3782878	0.8669149	0.9088156	0.9162484	1.2656323	1.1072391	1.0933947	1.0201861	0.8425404	1.5231083	1.0531036
Phase-1 RCT-140	1.0720767	1.557481	0.9422238	1.197858	0.9759584	0.9977018	0.9617018	0.95789504	0.97119784	0.9433333	1.0578036	1.070287	1.0582028
Cyclin D1	0.7989657	1.190164	0.6326394	0.72673106	0.8327274	0.67947334	1.2481043	1.016888	1.033907	1.0503354	2.6181223	2.0147452	0.7834884
Phase-1 RCT-281	0.81237878	0.86745083	0.91972585	1.0311635	1.11817	1.0358952	0.6770577	0.8776451	0.8572715	0.8870133	0.78247434	1.026547	1.026547
Phase-1 RCT-287	0.4940482	0.39530325	0.6532769	0.7888357	0.87651046	0.46748134	0.28542545	0.4417873	0.784347	0.39653167	0.3068605	1.0242489	1.0242489
Retinol-binding protein (RBP)	0.45230806	0.3220464	0.4972308	0.7508533	1.0022451	0.9694675	0.9700376	1.1065908	1.1071117	1.2170933	1.0285528	1.007382	0.8076551
ATP-activated glucocorticoid-receptor	0.7284832	0.76899533	0.8091418	0.8946337	1.1253346	1.1449889	0.9360019	0.8681673	0.9095224	1.0330625	1.1430318	0.8508271	0.88734787
translocation promoter (GK)	1.0635383	1.2001284	1.0989119	1.1548932	1.0708724	0.88414747	0.84569865	0.98505955	0.98113598	0.8450091	0.83236754	0.8659849	0.8659849
Phase-1 RCT-460	0.9227019	0.94248605	0.9132986	1.8802722	1.0500202	0.9304692	1.0732787	0.87306905	0.9827813	0.7240837	1.8328377	1.5357057	0.9472378
Pyruvate kinase, muscle	0.8351138	0.8470702	0.8845827	0.920735	0.87675333	0.92659678	0.8988333	1.022275	1.0279727	1.0413941	0.9576856	0.9450212	0.88150104
PAR Interacting protein	0.8608511	1.0694425	0.94530976	0.80840044	1.0033407	0.81308944	1.1428217	1.0868893	1.2416822	1.3093783	1.6816473	1.681652	1.1352782
Nucleoside diphosphate kinase beta isoform	1.3397591	1.609979	1.2044159	1.1566218	1.0701222	1.0420221	1.2556834	1.1195099	0.99976184	1.0199887	1.4837395	1.6083533	1.0571584
Gadd153	0.16576286	0.21702619	0.30885493	0.7085946	0.51487895	0.9713823	1.0070947	0.7272087	0.6850058	0.8955242	0.46015564	0.6268825	0.7807036
Insulin-like growth factor binding protein 1	1.0756424	1.2182635	1.2206528	1.0963703	1.1381238	1.0473195	0.9941923	0.86145377	0.72245583	0.86541824	0.9580864	0.9260048	1.0910587
c-H-ras	1.075605	0.91318686	1.0465375	1.1841125	1.0201088	0.8989856	0.7691484	0.819843	0.8676842	0.9555515	0.9057145	0.8208283	1.1245339
N-hydroxy-2-acetylaminofluorene sulfotransferase (S11C1)	0.33773658	0.5087689	0.48030058	0.9006225	1.082015	1.1971667	1.1105255	1.0789766	1.1346847	0.81819206	0.9586896	0.9958902	0.77661325
Phase-1 RCT-52	0.8226683	0.701213	0.8903888	0.8221805	0.85248166	0.8608745	1.0604991	1.1058898	1.0875318	1.1864817	1.2265075	1.4329345	0.78139745
Alpha 1 - inhibitor III	0.16576286	0.21702619	0.30885493	0.7085946	0.51487895	0.9713823	1.0070947	0.7272087	0.6850058	0.8955242	0.46015564	0.6268825	0.7807036
Steroid carrier protein 2	0.8786273	0.9245398	1.2789896	1.0387591	0.8776834	1.2802987	1.1358793	1.1358793	1.0818988	1.0068676	1.1911036	1.3468842	0.98111873
Organic anion transporter 3	0.63891004	1.3748978	0.7738117	0.5952773	0.76925004	0.98728814	1.3768134	1.1520414	0.9718759	0.9753391	0.9940133	1.295888	1.0355397
Calgranulin B4	0.7023516	0.4500408	0.731053	0.8157693	0.7692389	0.77143455	0.7349884	0.87838654	1.0243044	0.7318093	0.78900146	0.81453234	0.8518482
Phase-1 RCT-182	0.850215	0.70126766	0.596549	0.8523336	1.1499349	1.110083	1.0259411	1.1687398	1.024808	1.1517327	1.0432426	0.9533665	0.930076
Calgranulin B8	0.8800016	1.0339511	0.8533495	0.6555555	0.6890487	0.77539843	0.9655778	1.1589131	1.0920713	1.0664564	1.1024855	1.0470881	1.0013036
Aldehyde dehydrogenase, microsomal	1.071797	0.826531	1.0433149	0.7885667	1.0274132	1.024708	1.0276314	1.0588164	0.7681475	1.067287	1.106728	1.0000972	1.0611748
Phase-1 RCT-128	0.5525404	0.65987647	0.7240809	0.9526242	0.757381	1.071798	1.3482887	1.4784463	1.574788	1.3951885	1.1270227	1.1694187	0.93737488
Phase-1 RCT-102	1.3587828	1.1500986	0.90051226	0.8433005	0.5028794	0.4734413	0.759895	0.8703357	1.0030366	0.86839896	0.7798803	0.8260614	0.84480234
Preproalbumin, sequence 2	0.63889274	0.40874577	0.6904738	0.7885974	0.8094539	0.82887366	0.81010246	0.70728314	0.9021241	0.77915204	0.7437652	0.73337525	0.68382368
Apolipoprotein AII	0.6481661	0.89084353	0.8356555	0.52714355	0.5756288	0.7667256	1.0058495	1.0386091	1.0943185	0.9561453	0.6712375	0.86696663	0.8483565
Phase-1 RCT-10	0.6709882	0.5903469	0.6502797	0.89473355	1.0821829	1.347114	1.1366465	1.1120347	1.220819	0.9684818	1.1728807	0.94311315	0.92583306
Phase-1 RCT-48	1.1332221	0.70389858	1.2846575	0.9201945	0.89912443	0.60833715	1.3321055	1.3069513	1.39749	1.3672098	1.3672098	1.8720988	0.86727595
Phase-1 RCT-8	0.57673603	0.41844549	0.690763	0.8420073	0.8383393	1.0357663	0.7205276	0.72588044	0.85410484	0.76184985	0.74081314	0.8186643	0.7424074

Phase-1 RCT-168	0.660021	0.848411	0.90763285	0.96241623	0.9284378	1.0132192	0.6931724	0.8581658	0.889843	0.9985847	0.82069063	0.78072897	1.0064405
Phase-1 RCT-46	0.617419	0.6941021	1.039392	0.969002	0.9749044	1.0346506	0.630362	0.83683795	0.86343557	0.94811765	0.7322763	0.9431763	1.1543163
Beta-aldolase synthase	1.20764	0.86388644	0.82723824	0.9288182	0.282006	1.144658	0.8469515	1.2141876	1.2955405	1.4242402	1.31592	1.4971808	
Phase-1 RCT-288	0.85993963	0.8412798	0.8505126	0.32238492	0.734028	0.7843578	1.171437	1.2054237	1.3478404	1.1029518	1.1486808	1.0544476	0.8720676
Carbonic anhydrase III	0.8579221	0.1641041	0.90411616	0.5692582	0.33945586	0.8492805	1.331361	1.787873	1.232781	0.9278815	1.5831883	1.2893487	0.4555247
Phase-1 RCT-291	1.0675035	1.1379033	0.9090218	0.7117708	0.7457681	0.76791894	1.031639	1.787873	1.033705	0.9838791	1.0891692	0.8878804	
Carbonic anhydrase III, sequence 2	0.5667108	0.666213	0.9331274	0.7815811	0.80307245	0.90147257	0.8967824	0.80892387	0.891543	0.9750666	0.71638406	1.0308165	
Phase-1 RCT-271	0.9197391	0.7593402	0.8139433	0.87135756	0.78482806	0.7767287	1.0697711	1.0597711	1.2246428	1.3002732	1.4238212	1.0111132	
HMG-CoA synthase, mitochondrial	0.8128433	1.0351063	1.0483416	0.5513197	0.6286523	0.7553587	0.8838374	1.0447333	0.92832147	0.9902969	0.9308046	1.0105808	
Phase-1 RCT-189	0.8940215	1.1653336	1.2709137	1.000736	0.8103336	1.008867	0.6823276	0.7704001	0.7518847	0.8057505	0.8498617	1.1658815	
Phase-1 RCT-40	0.8971276	0.7930873	0.8744047	0.9082475	1.220856	1.3333477	0.833988	0.915852	1.0219839	0.8395569	0.870186	0.8177124	0.81812924
Urokinase protein 2 precursor	0.40037867	0.98831777	0.5308691	1.2585374	1.1614265	1.1283952	0.8911843	0.879728	1.0071808	0.7950026	0.8727634	0.7860936	0.75898
Paraoxonase 1	0.22764438	0.48748118	0.2876798	0.6884473	0.7016091	0.93017393	0.93742275	0.87730825	0.90302394	0.7476889	0.96578804	0.8308595	0.7005753
Liver fatty acid binding protein	0.40239152	0.9284762	0.9389145	0.5982145	0.8247554	0.77631533	1.0385555	0.9338476	0.81420773	0.72195435	0.6314094	0.48111573	0.697871
Preseitin-1	0.17259859	0.18975354	0.309957	0.345077	0.5410899	1.0051391	0.48838218	0.71818984	0.67619103	0.9009016	0.44669604	0.53474685	0.58918742
Phase-1 RCT-38	0.921813	1.4052379	0.8311333	0.7317744	0.7544671	0.8742824	1.1942757	1.1176802	1.3503039	1.4675843	1.801557	1.175128	0.8473301
Phase-1 RCT-270	0.59730095	0.75631183	0.48375957	0.9457537	1.0822341	1.190398	1.0282761	1.1621456	1.0632636	0.91295856	0.8972406	0.8483733	0.73763494
Transferrin	0.21286875	0.21396582	0.3407878	0.7236181	0.6545037	0.9452861	1.3479048	1.288237	1.1983573	0.5830988	1.3110855	1.302487	0.57776576
Hepatic lipase	0.3910347	0.4326326	0.44016546	0.664503	0.6244513	0.68897263	0.7212762	0.8440919	0.908082	0.73588808	0.8005423	1.0174009	
Cytochrome P450 11A1	1.0707425	1.4228867	1.1604056	0.650808	0.92865187	0.96378175	1.3284726	1.4155917	1.079998	0.85475286	0.52488514	0.6416678	0.8132473
Phase-1 RCT-175	0.6245756	0.5413659	0.7105068	0.8934925	0.9421827	1.1068927	1.4425417	1.0941454	1.0223312	0.9163296	1.412492	1.1901182	0.90780814
Phase-1 RCT-117	1.788768	0.8548924	0.8457238	0.9682721	1.266158	1.448117	0.869437	1.238357	0.98380435	1.242084	1.43396	1.1158932	1.4738036
Phase-1 RCT-137	0.3248517	0.2884718	0.4473648	1.033828	0.8551493	0.8923233	1.105427	1.2337894	1.2455503	1.1978705	1.0128396	0.8419915	0.8895867
Melanoma-associated antigen ME491	1.0990117	1.325252	1.2436352	1.158406	0.86110497	0.7859552	1.1512918	1.08857	1.0809538	1.3421401	1.1065127	1.0722913	0.9930476
Phase-1 RCT-12	0.7058618	0.9417084	0.8778794	0.88332715	0.94824296	1.1868689	1.4358508	1.2055308	1.3466654	1.1473188	1.4201219	1.3816892	0.78038555
Phase-1 RCT-152	1.3472115	2.0428762	1.3076937	0.9476872	0.89242813	0.83272846	0.85688885	0.950102	0.9520241	1.1135389	1.3315772	1.1245168	1.2764939
14-3-3 zeta	0.51602936	0.5058299	0.66454506	0.84236187	1.00633	1.1675328	1.03459264	0.82180827	1.0433556	0.8773744	0.6927841	0.68658953	0.98714995
Cytochrome P450 2C23	1.263572	1.2637512	1.2953727	1.0058327	0.94816834	1.1973129	1.43478384	1.3778384	1.3530181	1.086432	2.0538628	1.9678106	0.9171631
Voltage-dependent anion channel 2 (Vdac2)													
Phase-1 RCT-154	1.1625053	1.0583947	0.9765893	1.0428618	1.017515	0.9838216	0.8658128	0.91495544	1.0516373	0.9491661	1.2580551	1.1580461	1.0072473
Superoxide dismutase Mn	1.2328404	1.5455337	1.8652498	1.1657478	1.0273875	1.0918903	1.2202337	1.162286	1.0975716	1.253161	1.4823301	1.5278868	1.1517783
C-myc	1.8423081	2.0737143	1.584699	1.027679	1.032762	1.1537318	1.6251683	1.1607179	1.3247387	1.2714094	1.084855	1.1776052	1.082324
Phase-1 RCT-196	0.4888467	0.34538454	0.52773297	0.999704	0.9192833	1.0132471	0.74751604	0.8586351	0.7142164	0.85076207	0.8080468	0.73404014	0.8588871
Cyclin G	1.829508	1.8582288	1.3973461	1.2433742	1.0795817	0.93282683	1.3733817	1.2240802	1.235131	1.0183083	3.034842	3.27404	1.0690874
Calgranulin B5	1.5035176	1.785585	1.6874289	1.1903757	1.0844852	1.0749448	0.90514163	0.9817941	0.8837213	1.0610517	0.8917338	0.8625377	1.0124044
p53	1.170462	1.0021885	1.0253423	0.90264698	0.8281052	0.6840784	1.357921	1.227481	1.3202843	0.89146708	1.5239137	1.3973541	0.890831
Phase-1 RCT-205	1.2586653	1.608789	1.3608766	0.86206995	0.80931777	0.87408054	0.89997125	1.021888	1.1120857	0.8629237	1.0973424	1.1517892	1.0808796
Phase-1 RCT-88	1.1850681	0.9861259	1.2978503	1.0494736	1.0830935	1.1013256	1.2920239	1.1687706	0.8527527	0.8629237	1.0973424	1.1517892	1.0808796
Caspase 3	1.8112053	2.2556586	1.8804085	0.9669793	1.1012813	1.157303	0.8380038	0.855204	1.0053688	0.9137441	1.0688215	1.131703	1.0682535
Alpha-tubulin	1.2841197	1.0585104	1.1556838	1.0608853	0.9707009	0.9798809	0.855204	1.0443726	1.0053688	0.9137441	1.0688215	1.131703	1.0682535
Ribosomal protein L13A	0.76692655	1.5518144	1.1495544	1.0399258	0.80839678	1.048898	1.2094421	0.9842725	0.97385174	1.0541776	1.253122	1.2657864	1.0345268
IgE binding protein	0.935704	0.7496214	1.2207936	1.0059168	1.1103745	1.2448051	0.9465332	0.9184723	0.9398217	1.1446973	0.85097516	0.8100483	0.92524116
Phase-1 RCT-39	1.4129955	2.3039718	1.4080751	0.93973354	0.97810453	0.9700981	1.273827	1.0080364	0.97854008	0.891368	1.398341	1.6314013	0.882832
Collin	0.66318154	0.45110646	0.75995314	0.89617544	0.857658	1.043321	0.828393	0.77117693	0.99331313	0.8580019	0.7393745	0.8710126	
Heme oxygenase	3.2578213	2.1374784	5.6134162	1.323749	1.0404551	0.85887897	0.80088147	0.7288839	0.8278591	0.693206	0.5392975	0.66524635	0.9025846
Phase-1 RCT-241	1.0871738	0.942003	0.8767905	1.1864891	1.3588008	1.0014669	1.0124931	0.9630087	1.0168425	1.0185623	0.95741874	1.0172418	1.075934
Ribosomal protein S9	0.47802043	0.46371424	0.61733218	1.286718	0.89893453	1.0017728	1.2472284	1.1852898	1.1293916	1.0733988	1.459048	0.9728019	1.003057
Phase-1 RCT-258	1.210552	0.80097153	0.8102806	1.489013	0.784407	1.0076262	0.86871124	1.012419	1.0557699	0.9929546	1.2268856	1.050431	1.0234112
Argininosuccinate lyase	0.5299284	0.44042695	0.70595844	1.0781267	0.8304075	0.9399387	1.137453	1.183275	1.1367239	0.7498071	1.5283361	1.339768	0.83890545
Phase-1 RCT-180	0.90055827	0.73105145	0.7275768	0.9281404	0.8751745	0.82533965	0.8751745	1.043284	1.1505985	1.098757	0.86478134	0.87718814	0.8022863
Mitochondrial protein-1	2.064454	2.0300626	1.5686344	0.88557065	1.2932029	1.0623005	0.81248417	0.7346091	0.8002153	0.7723585	1.278543	1.3562822	1.152531
Ornithine decarboxylase	2.259693	2.0640047	1.1628684	0.85078643	0.8346332	1.30574	0.7855509	1.030574	0.902153	1.0718437	1.2900862	1.246349	1.0590022
Thymosin beta-10	0.7543963	0.6806314	0.919007	1.016379	0.8841261	0.83884485	1.40737	1.0870395	1.0025921	1.0346295	1.192718	1.4170622	0.8680201
Phase-1 RCT-72	1.5621533	2.053513	1.3572544	2.13724	1.013525	0.959264	1.1484046	1.087422	0.85568765	0.99197376	0.9819115	1.0522423	0.8345928
Phase-1 RCT-109	0.778074	1.071818	0.9086197	0.99957	0.8401248	1.0878533	1.33208	1.0619586	1.1016163	1.1838129	1.2741897	1.2171144	0.8770886
Phase-1 RCT-78	0.70309895	0.7451371	0.7739084	0.8133659	0.8664384	0.8133659	0.89341088	0.932291	0.8785524	0.9499761	0.8213284	0.8577413	1.1453866
Vacuole membrane protein 1	0.28598607	0.25159853	0.54867695	0.8680634	1.0241232	1.1485078	0.8608811	0.79900337	1.0316813	0.7374774	0.88671996	0.9852183	0.70989193

Table 29

Phase-1 RCT-153	1.2036846	0.95292284	1.2005649	1.1991078	1.1301591	1.0475358	0.8329452	1.0081115	0.9338067	0.9817731	1.0788397	0.9214473	1.082089
Phase-1 RCT-113	0.9136374	0.75235295	0.97783263	1.1131421	0.8903801	1.1139574	0.78006004	0.9985383	0.9368418	0.979641	1.0592271	0.9023994	1.043171
Endogenous retroviral sequence, 5' and 3'	0.9762037	1.1741261	1.2893927	0.78555816	0.47601545	0.6148666	0.8245942	0.97984624	0.796095	1.135726	0.6442027	0.7595394	1.2964071
LTR													
Beta-actin	1.3941528	1.423387	1.2098732	0.6916952	0.5581552	0.70860806	0.5631421	0.70857626	0.6296839	0.8900166	0.88881935	1.0581359	0.83807524
Phase-1 RCT-65	1.1604448	1.1476523	0.92043635	1.1737394	1.1283009	0.8905585	0.97634474	1.0578706	0.9367471	1.0149153	1.1736362	1.1776758	0.9765218
MHC class I antigen RT1.A1(0) alpha-chain	0.90419998	1.8034426	1.2207135	0.8753545	0.76673077	0.8536856	1.3088851	1.427251	1.2294589	1.622297	1.4189853	1.6081971	1.1092766
Bax (alpha)	1.9108559	1.9662887	1.897394	1.1718135	0.8674365	0.826158	1.4588511	1.157699	1.1782024	1.0228235	2.087134	2.4598	1.0816919
Carbonic dehydratase	1.188137	1.1852311	1.012857	1.4083107	1.2149515	0.9839226	1.9604774	1.1263167	1.0582131	1.1285795	1.3811407	1.4276092	0.8945502
Beta-actin, sequence 2	0.7532345	0.59745926	0.816336	0.9152606	1.1573838	1.1087626	0.8925662	0.9517408	1.0278064	0.9503513	0.81765246	0.8245312	0.9010673
Interleukin-10	1.1597526	1.8088737	1.384327	1.2453	1.1204749	1.014022	1.0672139	0.9932983	0.9693864	1.0353397	0.97081244	1.0817134	1.0516808
Phase-1 RCT-191	0.71092785	0.731363	1.0072421	0.87791884	0.6899713	0.7317354	0.8291899	0.88783535	1.0472658	1.0467805	0.9038601	1.0679215	1.0490595
Phase-1 RCT-111	0.6477057	0.7666989	0.7422201	0.8450523	0.74063398	0.85615203	0.8213806	1.155115	0.99011834	1.1653961	1.014855	1.0770562	0.8680654
Apoptosis-regulating basic protein	0.4284487	0.489633	0.5669516	0.804061	0.5786701	0.76778734	1.4713881	1.1584975	1.2138932	1.0805949	1.2422269	1.1234995	0.7558854
Glutathione peroxidase	1.1788624	1.2542163	1.0785545	1.0845912	0.8149809	0.89257026	0.9188713	0.95626044	0.97698456	0.9842665	0.9362818	0.8092204	1.0025098
Phase-1 RCT-239	1.2887721	1.2838287	1.2458445	1.0510511	0.899118	0.8713805	0.9387615	1.1824938	1.1322019	1.0216343	1.0948322	1.0472127	1.241641
Tryptophan hydroxylase	1.0723176	1.0336851	1.3000569	1.118335	0.8880148	0.878168	1.2084645	1.1824938	1.1322019	1.0216343	1.0948322	1.0472127	1.241641
Sulfotransferase K2	0.9702691	0.7997505	0.94470775	0.99719185	1.0253259	1.0055375	1.0384059	0.90919125	0.82692975	0.8976108	1.0483722	1.0472127	1.241641
Calgranulin B9	1.1282729	1.06804	1.3151795	0.7875811	1.1282861	0.81672356	1.3253172	1.2474449	1.3762738	1.4815598	1.2458747	1.3593439	1.0081769
Phase-1 RCT-123	1.1866876	1	1.0934978	1.0746821	1.1407896	1.0248716	1.048335	1.1027435	1.0951377	1.174788	1.3253852	1.1781644	1.0492045
Phase-1 RCT-58	0.71783694	0.7106548	0.8427555	0.9366396	0.8727883	0.98073053	1.0845102	1.0652104	1.178307	1.1194938	1.1048634	1.1066139	1.0282939
Aquaporin-3 (AQP3)	1.1520977	0.95811427	1.1007599	1.1370355	1.0328603	1.0033718	1.0204423	1.1281035	1.0277059	1.0294518	1.0406304	1.1066139	0.9922711
Stearyl-CoA desaturase, liver	0.27539902	0.36332082	0.18900591	0.26035724	0.08031975	0.0647125	0.8718598	0.9201332	3.1352446	3.4811265	0.68189648	0.788544	0.92818785
Phase-1 RCT-94	1.0454888	1.151795	1.0965325	0.75903167	0.589965448	0.66535504	1.5298807	1.0737313	1.031491	1.1343285	1.1185667	1.08092	1.1178
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-no, necrosis													
observed; yes-both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 5 and as													
included in Table 26)													

Table 29

Table 2b. Expression Data for 24 Hour Timepoint (1)																	
Compound-Dose (2)		Liver Toxicity Inflammation Classification (4)															
QUIN 25	QUIN 25	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 255	QUIN 255	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100	QUIN 100
2545	2546	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gamma-actin, cytoplasmic	0.7852165	0.81067675	0.9809373	0.9809373	0.9809373	0.81757434	0.81747448	1.0740211	1.053953	1.3470588	1.5169825	1.265482	1.1633969	1.1398797			
Phase-1 RCT-145	1.007056	1.1272136	0.90308124	0.90308124	0.90308124	0.82471323	0.82471323	0.9357027	0.9747172	0.82079584	0.86815863	0.9433557	1.1	1.0005544			
Gad65	1.0285738	1.2553918	0.9116373	0.9116373	0.9116373	1.340157	1.1764865	1.08337355	0.8643298	0.95409614	1.1991628	0.82477685	1.1405818	1.2552323			
Phase-1 RCT-78	1.1456976	0.884071	1.756361	1.756361	1.756361	1.340157	1.1764865	1.08337355	0.8643298	0.95409614	1.1991628	0.82477685	1.1405818	1.2552323			
Fas antigen	0.98119195	1.0922945	1.0220205	1.0220205	1.0220205	1.1857228	1.1620443	1.0831762	0.9543703	0.83003086	1.2039263	0.72438197	0.9787889	0.94811537			
Macrophage inflammatory protein-2 alpha	0.95078284	0.95320225	1.0361364	1.0361364	1.0361364	1.0484562	1.0290914	1.1258103	1.0021188	0.8494365	0.99836626	1.17648197	0.9582168	1.02789635			
Integrin beta1	0.9497713	1.1477582	1.0597669	1.0597669	1.0597669	1.318445	1.0735862	1.0198949	1.080605	0.80780984	1.0306348	1.003377	1.3250773	1.4357079			
Phase-1 RCT-207	1.0457318	1.0008882	0.9472553	0.9472553	0.9472553	0.97579706	1.0709745	1.0714698	1.0913901	1.0621737	1.0839772	1.1568118	1.0936779	1.0143826			
Aspartate aminotransferase, mitochondrial	1.0382701	0.93619347	0.827469	0.827469	0.827469	0.7728044	0.9304537	1.1677748	0.8027186	0.9522904	0.8377584	0.9223169	1.2447179	1.001762			
Cashe-alpha	1.0010295	1.1392551	0.94337515	0.94337515	0.94337515	1.0324174	0.9350437	1.1877748	0.8027186	0.9522904	0.8377584	0.9223169	1.2447179	1.001762			
Malic enzyme	0.99652274	0.9561665	1.0879874	1.0879874	1.0879874	1.0528708	0.9240845	0.8589606	0.8027186	0.9522904	0.8377584	0.9223169	1.2447179	1.001762			
Phase-1 RCT-30	0.91687566	0.8184088	0.8681381	0.8681381	0.8681381	0.87021613	1.3071083	1.0217474	1.2469212	0.7857857	0.8050736	0.9109697	1.2950086	0.91794583			
Hepatocyte growth factor receptor	0.8635628	1.163394	1.1097558	1.1097558	1.1097558	1.2387501	1.2728457	1.0217474	1.0532155	0.7857857	0.8050736	0.9109697	1.2950086	0.91794583			
MAP kinase kinase	1.025793	1.029203	1.0442379	1.0442379	1.0442379	1.0665947	1.0623115	1.0542689	0.7692621	0.8441146	1.0228635	0.9517219	1.0338324	1.1314787			
Sodium/glucose cotransporter 1	0.91681087	0.63377894	0.9006176	0.9006176	0.9006176	0.8253388	0.9042127	0.9042127	0.7692621	0.8441146	1.0228635	0.9517219	1.0338324	1.1314787			
Phase-1 RCT-27	0.7784683	0.8134911	2.1187859	2.1187859	2.1187859	1.8516805	1.0942768	1.0942768	0.7692621	0.8441146	1.0228635	0.9517219	1.0338324	1.1314787			
Phase-1 RCT-50	0.99737835	1.0599244	0.9178111	0.9178111	0.9178111	1.140054	1.0114877	1.1689232	1.0114877	1.0942768	1.0942768	1.0942768	1.0942768	1.0942768			
Phase-1 RCT-192	0.9028577	0.9759045	0.9261078	0.9261078	0.9261078	0.834555	1.0295621	1.0114877	1.0114877	1.0942768	1.0942768	1.0942768	1.0942768	1.0942768			
Phase-1 RCT-286	1.0333199	0.8881396	0.92063195	0.92063195	0.92063195	0.77083453	0.93637447	0.71795078	0.93637447	1.0114877	1.0942768	1.0942768	1.0942768	1.0942768			
Phase-1 RCT-37	0.9560975	0.8897503	0.95055336	0.95055336	0.95055336	0.9788421	1.3863744	1.081175	1.0548938	0.8897503	0.8897503	0.8897503	0.8897503	0.8897503			
Organic cation transporter 3	0.9441845	0.970784	0.9928735	0.9928735	0.9928735	0.98532425	0.7655504	0.7655504	0.7655504	0.7655504	0.7655504	0.7655504	0.7655504	0.7655504			
60S ribosomal protein L6	0.8683781	0.85775006	0.9208508	0.9208508	0.9208508	0.85475594	0.8433826	0.7491214	0.80323744	0.84328955	0.6517982	0.8985023	1.0580842	1.0040264			
Zinc finger protein	1.0533012	1.0487858	0.923312	0.923312	0.923312	0.94089654	0.8843826	0.7491214	0.80323744	0.84328955	0.6517982	0.8985023	1.0580842	1.0040264			
Calgranulin B2	0.93609	0.94239444	0.92309976	0.92309976	0.92309976	0.8428718	0.94089654	0.8843826	0.7491214	0.80323744	0.84328955	0.6517982	0.8985023	1.0040264			
ID-1	1.0884262	1.1371402	0.964688	0.964688	0.964688	0.8374087	1.2748535	1.3296196	1.2259301	0.9718444	0.86210897	0.97279584	1.2047851	1.2073487			
Phase-1 RCT-92	1.0540027	1.0700167	0.9051601	0.9051601	0.9051601	0.77883627	1.4585897	1.4880248	1.03889645	1.1371324	0.6752941	0.80779584	1.2047851	1.2073487			
Phase-1 RCT-115	1.0584423	1.2076844	1.0603994	1.0603994	1.0603994	1.1651174	1.1458597	1.4880248	1.03889645	1.1371324	0.6752941	0.80779584	1.2047851	1.2073487			
Madrin F/G	0.90608	1.0432537	1.0602516	1.0602516	1.0602516	1.0441173	1.1225145	1.5043013	0.9415528	1.6683137	1.5627222	1.7605398	1.4665287	1.6971053			
Mut. homologue (MLH1)	0.9043617	0.8808865	1.0244761	1.0244761	1.0244761	1.1389219	0.89258455	0.84240746	0.9314528	1.6683137	1.5627222	1.7605398	1.4665287	1.6971053			
Phase-1 RCT-79	0.9268018	0.83000106	0.9159553	0.9159553	0.9159553	0.9844881	0.98179313	0.9072369	0.91277659	0.97180337	0.8644334	0.80545564	0.9372591	1.39272514			
Sordiol dehydrogenase	1.350863	0.847483	1.167663	1.167663	1.167663	1.335812	1.0845018	1.395812	1.394108	1.4512165	1.4633061	1.3772538	1.332182	1.2172887			
Phase-1 RCT-24	1.0298623	1.169484	1.082832	1.082832	1.082832	1.338816	1.1795604	1.0301218	1.2003784	1.2537949	0.9953067	0.9157445	0.946523	0.9040177			
Calgranulin B1	1.0273162	1.1494462	0.8676535	0.8676535	0.8676535	0.9547845	0.9444661	0.901218	1.2003784	1.2537949	0.9953067	0.9157445	0.946523	0.9040177			
Elongation factor-1 alpha	0.7873924	0.794615	1.0254552	1.0254552	1.0254552	0.8096444	0.8443543	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719			
L-glutono-gamma-lactone oxidase	0.8673294	0.784615	1.0254552	1.0254552	1.0254552	0.8096444	0.8443543	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719	0.8174719			
Phase-1 RCT-33	1.0204476	0.88539404	0.7354151	0.7354151	0.7354151	0.6239225	0.6239225	0.6239225	0.6239225	0.6239225	0.6239225	0.6239225	0.6239225	0.6239225			
Chun	0.9758685	1.1428284	1.060886	1.060886	1.060886	0.9611391	0.9256947	0.81798464	1.3986161	1.3986161	1.3986161	1.3986161	1.3986161	1.3986161			
Phase-1 RCT-233	0.91551703	0.9237704	1.0206192	1.0206192	1.0206192	0.825282	0.84083444	0.7353154	0.8459181	0.9520917	1.266678	1.1239498	1.2618698	1.0516958			
Phase-1 RCT-38	0.9509437	1.1752687	1.0313971	1.0313971	1.0313971	0.94265294	0.9334667	0.7353154	0.8459181	0.9520917	1.266678	1.1239498	1.2618698	1.0516958			
Phase-1 RCT-242	1.0514591	1.1488353	0.981539	0.981539	0.981539	1.0846169	1.0025971	0.89152706	0.8510307	0.96451173	0.8072447	0.9474162	0.9245623	1.2945121			
Phase-1 RCT-181	0.97705068	0.9900698	0.9814629	0.9814629	0.9814629	1.0984005	1.003032	0.8454187	0.8116501	0.95811775	0.8044938	1.3747162	0.9200233	0.9060251			
Phase-1 RCT-179	0.9539171	1.0391177	0.781926	0.781926	0.781926	0.7940878	0.79407195	1.000979	0.87863436	1.5356847	1.0448286	0.81767978	0.7939805	0.7939805			
Phase-1 RCT-144	0.9530766	1.0333773	0.9824383	0.9824383	0.9824383	0.7866440	0.7866440	0.7866440	0.7866440	0.7866440	0.7866440	0.7866440	0.7866440	0.7866440			
IR-a	0.9152943	0.7703335	0.9966945	0.9966945	0.9966945	0.9217463	0.9217463	0.9217463	0.9217463	0.9217463	0.9217463	0.9217463	0.9217463	0.9217463			
Phase-1 RCT-225	1.1396652	1.1690888	1.3184081	1.3184081	1.3184081	0.86417528	0.86417528	0.86417528	0.86417528	0.86417528	0.86417528	0.86417528	0.86417528	0.86417528			
60S ribosomal protein L6 (alternates done 1)	0.95300704	0.86215115	0.81420776	0.81420776	0.81420776	0.89200386	0.89200386	0.89200386	0.89200386	0.89200386	0.89200386	0.89200386	0.89200386	0.89200386			
Beta-actin, class I	0.9504359	0.970106	1.0														
Multidrug resistant protein-2	0.988189	0.98948175	0.9674374	0.9674374	0.9674374	0.983295	1.1787987	1.3122962	1.4545772	1.4044339	1.4959573	1.1205					

Phase-1 RCT-49	0.97621614	1.04693446	0.97910113	0.97810113	0.93083832	0.92916095	0.80512226	0.87252927	0.92977214	0.76370037	0.78960075	0.75133777	1.066205	0.963948
Calgranulin B3	0.98302556	0.9869445	0.98201808	1.08231332	1.0765264	1.0765264	0.984446	1.08231332	1.0765264	1.0765264	1.0765264	1.0765264	0.9916373	0.9802556
NADP-dependent isocitrate dehydrogenase, cytosolic	1.0701575	1.0487806	1.0040035	0.984446	1.0584464	1.0584464	0.78381284	1.0555737	0.8372254	1.012501	0.9648631	0.97065026	1.0023574	0.98430236
Oxysterol binding protein 1	1.0866456	0.80814147	0.97677565	1.0058391	0.9729032	1.1468955	0.9814765	1.0058391	0.9729032	1.0058391	1.0058391	0.9729032	0.9729032	0.9729032
Sodium/bile acid cotransporter	1.1184043	0.82288167	0.93713516	0.7228358	0.7228358	0.7228358	0.9814765	0.7228358	0.7228358	0.7228358	0.7228358	0.7228358	0.7228358	0.7228358
Phase-1 RCT-174	0.98302556	0.9869445	0.98201808	1.08231332	1.0765264	1.0765264	0.984446	1.0555737	0.8372254	1.012501	0.9648631	0.97065026	1.0023574	0.98430236
Phase-1 RCT-77	0.9382042	0.70245683	0.85031444	0.8417267	0.8088483	0.8414101	0.746273	0.8088483	0.8414101	0.746273	0.8088483	0.8414101	0.746273	0.8088483
Inositol polyphosphate multikinase (IPMK)	0.87227046	0.9927693	1.0228392	0.817362	0.6302043	1.1182895	1.065241	1.1643256	1.8084167	1.500347	1.2395265	0.817362	0.817362	0.817362
Phase-1 RCT-256	0.87698854	0.9074374	0.9002881	0.81311727	1.2603745	1.2603745	1.0230328	1.2603745	1.0230328	1.2603745	1.0230328	1.2603745	1.0230328	1.2603745
Equilibrative nucleoside/nucleosine-sensitive nucleoside transporter	1.002368	0.8216926	0.96100885	0.8252681	0.96252364	1.0476381	0.83774215	1.0225239	1.3581177	1.0764068	1.0067327	0.81208906	0.81208906	0.81208906
CDK102	1.0639113	1.0128525	0.9750206	0.9119828	0.9658579	1.1311054	1.2256654	0.9455957	1.0345078	1.0764068	1.0067327	0.81208906	0.81208906	0.81208906
Phase-1 RCT-209	0.9637778	0.95019495	0.9405372	0.92803315	0.8485032	1.0738367	0.98016727	0.78443253	0.9122184	0.87857183	0.87242186	0.7332911	0.7332911	0.7332911
NADH-cytochrome b5 reductase	0.98333354	0.86916363	0.9272093	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681	1.023681
Dynamin-1 (D100)	1.0046074	1.0061039	0.9741057	0.9410347	0.92742604	0.83030593	0.9423155	0.96292766	0.7540751	0.8819521	0.95436	1.10437	1.10437	1.10437
Senescence marker protein-30	0.94288285	0.74287903	0.6931003	0.6638716	0.9256822	1.0774349	0.96540123	0.79748996	1.0540508	1.5200514	1.0492301	0.82081856	0.58500416	0.58500416
Phase-1 RCT-89	1.0229722	0.90531534	0.8845675	0.877543	0.9362538	1.0719113	1.1987218	1.0077924	1.471751	1.3149458	1.201048	0.9079235	0.7899156	0.7899156
Carbamate pyrimidinyl-CoA transferase	1.0680021	1.1992592	1.2698808	1.1410227	1.17462928	0.8537277	0.6879095	0.78940134	1.2029265	1.6780982	1.1326364	1.5004939	0.8138441	0.5437435
Alpha-2-microglobulin	1.2020477	0.71681833	0.81051888	0.471624928	0.819121	0.84524513	0.71440274	0.8821395	0.92350628	0.794842	1.044042	0.97268318	0.8539191	0.8539191
Apolipoprotein CIII	1.1204582	1.171068	1.0090351	0.81051888	0.471624928	0.819121	0.84524513	0.71440274	0.8821395	0.92350628	0.794842	1.044042	0.97268318	0.8539191
Cathepsin L, sequence 2	0.94900775	0.79836977	0.8167811	0.98756876	0.97231895	1.1450361	0.9686725	0.9055718	1.4306892	1.6939192	0.80568186	0.5541354	0.4778928	0.4778928
Phase-1 RCT-141	1.0636032	1.0117358	1.422222	1.8374285	1.6023269	0.9831186	1.236521	0.9481752	0.8898194	1.0038116	1.1840575	1.4434526	2.3180885	2.3180885
Phase-1 RCT-289	1.025732	0.9255869	0.87804555	0.8516238	0.9140013	0.72903645	0.84892874	0.97055334	0.938942	1.411842	1.3422586	0.75781333	0.69209316	0.69209316
Endothelin-1	0.9892819	1.0112195	1.1230045	1.2632865	1.1330083	0.895708	0.8691632	0.94012064	0.76880115	0.8287105	0.9852234	1.0763469	1.4956217	1.4956217
Phase-1 RCT-282	0.94806997	1.1088768	0.95240647	0.9874828	0.96943593	1.0983454	0.86979584	0.98959546	0.78607844	0.96931415	0.8926953	1.3439277	1.132413	1.132413
Phase-1 RCT-140	1.011238	1.044291	1.0207866	1.0753552	1.0696429	0.9898072	1.1746694	1.1857449	0.9605994	1.0747852	1.1505986	0.85161877	1.132413	1.132413
Cyclin D1	0.7620281	0.8934252	0.7953063	0.84079397	1.1737216	1.0278108	0.8933309	0.84958976	0.9858976	0.7941703	0.9089425	0.9409637	1.230495	1.230495
Phase-1 RCT-287	1.1677316	0.9388616	1.0715622	1.0944834	1.007535	1.1026992	0.9884633	0.9858287	1.110395	1.043219	1.0032619	0.831073	0.9057584	0.9057584
Phase-1 RCT-281	1.0230012	1.0012152	1.0430083	0.9384551	0.9840837	0.8470288	0.90071744	0.9835299	1.1075817	0.9645415	0.8944539	0.8473943	0.957208	0.957208
Retinol-binding protein (RBP)	1.0378115	0.818038	0.9357709	0.8204033	0.84242517	0.8892478	0.91766316	1.0385827	1.612135	0.955467	1.0785127	0.85897366	0.6288695	0.6288695
ATP-activated glucocorticoid receptor	1.1161475	0.8172192	0.9485456	1.2045379	1.1407628	1.5375106	1.3481389	1.312052	1.821759	1.6003313	1.3418268	0.8507703	0.5750016	0.5750016
Translocation promoter (GVK)	0.91248596	0.98849994	1.0125974	1.010738	1.0436865	0.9153318	1.0211287	1.058084	1.251896	0.9691467	1.2532787	0.9938547	1.2184818	1.2184818
Phase-1 RCT-60	0.96020913	0.903871	0.848049	0.96011204	0.9609635	1.4318986	1.1988251	1.239278	1.1165818	1.0312232	0.8530294	0.9954117	0.9954117	0.9954117
Pyruvate kinase, muscle	0.866677	0.8696208	0.9378233	1.0792124	0.9842618	1.0592256	1.0280865	1.0211519	0.9991555	1.1575786	1.171416	1.117691	1.117691	1.117691
PAR interacting protein	1.0175697	1.0928716	1.118814	1.24398	1.231465	1.1546963	1.1436331	1.0135412	1.2564354	1.0700626	1.1338161	1.417528	1.5603817	1.5603817
Nucleoside diphosphate kinase beta isoform	0.96708814	1.4260406	1.089338	1.1542411	1.1382078	1.0789173	1.1404984	1.1499121	0.98885217	0.9807588	0.93849753	1.2024871	1.3005946	1.3005946
Gad153	0.8610951	1.1602	0.959853	1.2431123	1.1294914	1.1971648	1.2669328	1.4227346	1.4674399	1.3085007	1.0650221	1.4124533	1.7592249	1.7592249
Insulin-like growth factor binding protein 1	1.2330941	0.93784416	1.1203698	1.1520313	1.2075806	1.1661128	1.1455288	1.0758544	1.0217382	1.0594269	1.062063	0.9604461	0.9604461	0.9604461
c-H-ras	1.0369519	0.89925885	0.92438783	0.69424874	0.96485156	0.89473444	0.7487291	0.8607351	1.5697435	1.1276206	1.024578	0.74249804	0.6612811	0.6612811
N-hydroxy-2-acetylaminofluorene sulfoxidase (ST1C1)	0.9676572	1.2252026	1.1809768	1.2641763	0.98208295	1.1362408	1.5653754	1.2609345	1.7681054	1.59497	1.4342971	0.92924374	0.7588777	0.7588777
Phase-1 RCT-62	0.75893	0.82697923	0.8972026	0.54246193	0.8777495	0.8295482	1.1217235	1.0552762	1.5909928	1.303538	1.1185504	0.6893033	0.6791854	0.6791854
Alpha 1 - inhibitor III	0.9671007	0.96914876	1.0416982	0.91446877	1.1147645	1.1142302	1	0.89175024	1.1784449	0.8120474	1.0380779	1.2140794	1.2140794	1.2140794
Slend carrier protein 2	0.97597598	0.9001047	0.87251204	0.84836514	0.8844133	1.2261566	1.028043	1.176668	1.5992687	1.5791118	1.0778522	0.8815925	0.7182455	0.7182455
Ornithine aminotransferase 3	1.0181044	0.89899125	1.1806769	0.9523084	1.0404435	0.8236471	1.0776668	1.0704232	0.9660404	1.809413	0.92105454	0.9676013	0.9676013	0.9676013
Calgranulin B4	1.143107	0.85913014	0.8404985	0.9309737	0.8047288	1.23788	0.93657637	0.96771026	1.2275738	0.9116768	0.7836931	0.8728008	0.8186645	0.8186645
Phase-1 RCT-182	0.9168408	0.9189309	0.78901188	0.90758905	0.91018313	1.2609978	1.187006	1.0273874	1.3433119	1.286104	1.101225	1.1352394	1.2050407	1.2050407
Calgranulin B8	0.9630798	1.1237928	1.057381	0.9387663	0.9761251	0.7587779	1.2963971	1.2963971	0.8723847	1.0915754	1.3553597	0.888098	0.85218414	0.85218414
Adenylate dehydrogenase, microsomal	0.98179543	0.9459377	0.8776458	0.7291102	0.835924	0.787941	0.9451293	0.9548948	0.83941276	1.0148528	1.045564	0.7732715	0.41182372	0.41182372
Phase-1 RCT-102	0.9046398	1.010012	0.7661107	0.658550016	0.8788662	0.605273	0.7188402	0.69034746	1.0592687	1.5791118	1.0778522	0.8815925	0.7182455	0.7182455
Preproalbumin, sequence 2	0.8514194	0.812573	0.99899894	0.5587341	0.71481633	0.8240192	0.8482576	1.0600435	1.3096893	1.0631178	1.565368	0.63664583	0.42110907	0.42110907
Apolipoprotein AII	1.004927	0.5146854	1.0450095	0.84840775	0.6100309	0.852723	0.70509624	1.2036981	1.3988559	0.91004866	0.8423544	0.71802607	0.59846896	0.59846896
Phase-1 RCT-10	1.0269637	0.93613523	0.98271143	0.875716	0.89515265	0.8189604	1.1804757	1.534973	1.4223977	1.8884239	0.7884749	0.8884239	0.8884239	0.8884239
Phase-1 RCT-48	1.093708	1.1354841	0.9714095	1.0817555	0.94188994	1.0141337	1.3887866	1.029165	1.074241	1.520656	1.266652	0.8194928	0.8528981	0.8528981
Phase-1 RCT-8	0.9616784	0.86938534	1.0286592	0.85964474	0.73994694	0.8789026	0.9780403	1.0549271	1.3103789	1.0389631	1.4316384	0.69207066	0.66868408	0.66868408

Phase-1 RCT-168	0.9626336	1.0653285	1.126018	1.0654902	0.945425	0.9252074	1.0295192	1.1433146	1.1433203	1.0375334	1.1587106	0.9747601	1.6170791
Phase-1 RCT-98	1.0301274	1.017978	0.9779307	0.9686928	0.9859168	0.845895	1.012785	0.929357	0.7693964	0.8307137	1.0210425	0.9071384	0.75413084
Beta-alanine synthase	1.0326267	0.6200406	1.2153294	1.3668568	1.1536967	1.1536967	1.472432	1.1438127	0.8528977	0.6394625	0.87108195	1.071392	0.6865404
Phase-1 RCT-266	0.92174655	1.2036747	0.9274702	0.76234604	0.8411648	0.7363154	1.0107543	0.98468073	0.99413896	0.8108041	0.87167317	0.87375148	0.9322686
Carbonic anhydrase III	1.0082513	0.7632411	0.53893745	0.3010708	0.8185228	1.3401194	1.0709104	1.36989516	1.7898778	1.524112	1.7230847	0.8151803	0.3897834
Phase-1 RCT-281	1.0366925	1.111158	0.9588124	0.9889153	0.62581695	1.226672	0.8375027	0.8712271	1.2262909	0.987348	0.83357924	0.9789052	0.9685076
Carbonic anhydrase III, sequence 2	1.1069442	1.1742051	0.9350006	0.82057494	0.900701	0.7826493	0.81670808	0.9544652	1.3404571	0.920154	1.6947145	0.743914	0.6513489
Phase-1 RCT-271	0.9738002	0.8515368	0.8913117	0.596612	0.77158492	0.8445312	0.9608769	1.0006459	1.044526	0.9675892	1.3313834	0.8872805	0.8355868
HMG-CoA synthase, mitochondrial	0.917643	1.116241	1.1243532	0.8430324	1.0221483	1.8463323	1.1919316	1.1919316	1.7896249	1.777397	1.8604168	0.9345469	0.8210843
Phase-1 RCT-189	1.115472	1.121845	1.0468964	1.1420656	1.0894144	0.7895631	0.90146255	1.0476907	1.0344664	1.3704822	1.128152	0.75208116	0.82718545
Phase-1 RCT-40	1.0282321	0.9393413	0.9333686	0.8071748	0.98660186	1.0271748	1.1479387	1.051462	1.5968108	1.3704822	1.128152	0.75208116	0.82718545
Phase-1 RCT-2	0.8408187	0.7639512	0.7433301	0.80252594	0.9844867	0.7046531	0.72942984	0.6989516	0.9941211	0.9522378	1.128152	0.75208116	0.82718545
Urinary uroporphyrinogen decarboxylase	0.8988895	0.7902314	0.8413375	0.6284064	0.77330923	0.78609186	0.7606544	0.7476833	1.1580447	0.8500479	0.54687825	0.6871387	0.87157674
Paraoxonase 1	0.8121716	1.03972	0.9640737	0.8452461	0.91771384	0.6348455	0.74001676	0.6184926	0.4745237	0.8600769	0.57654394	0.87157674	0.87157674
Liver fatty acid binding protein	0.79292184	0.63820785	0.91486504	0.59897968	0.86729209	0.8630769	1.2200083	1.0550628	1.6514283	1.237971	1.74363	0.6886571	0.7081163
Presenilin-1	0.81842877	0.83365154	0.92048434	0.75060743	0.8608454	1.1576895	1.0045994	1.0368715	1.1768852	1.2169882	1.058798	1.2209257	1.1390448
Phase-1 RCT-38	0.87226747	0.8671803	0.9313459	0.7656517	0.7747057	1.1562512	1.1483598	0.97343373	1.3284816	1.1876316	1.1075922	1.3286765	1.3286765
Phase-1 RCT-270	0.75414246	0.76611517	0.88192785	0.49474502	0.6118408	0.8924186	0.84283555	0.78283507	1.2423944	1.0576386	1.0314531	0.45345435	0.41120887
Transferrin	0.7863316	0.9481161	0.8246583	0.706828	0.77149335	0.55935204	0.6303763	0.83155406	0.880203	0.84235173	0.9715542	1.0209522	0.9878268
Hepatic lipase	1.1494527	0.83229357	0.90932188	0.81863105	0.7508291	1.0728095	0.93228	0.9165428	1.2156088	1.161345	0.8720265	0.55332375	0.8283327
Cytochrome P450 11A1	0.91651344	0.9033226	0.8217822	0.79281354	0.8372471	1.0728095	1.1715301	1.0331917	0.784007	1.09223	1.0997103	0.8273022	0.687473
Phase-1 RCT-175	1.0282917	0.95180314	1.2028939	1.4547287	0.872471	1.2878188	1.077324	1.365984	0.9900828	0.784007	1.09223	1.0997103	0.8273022
Phase-1 RCT-117	0.85798925	0.81903307	0.80783385	0.7396764	0.8520518	0.8888366	0.7043913	0.7408385	0.9633265	0.8127893	0.8963729	1.2298855	1.3277155
Phase-1 RCT-137	0.9245447	1.0246388	0.9541271	1.001422	1.1038555	0.8129706	1.0855994	0.9302376	1.0699026	0.852495	0.811453	0.9690505	0.8992839
Melanoma-associated antigen ME401	1.0124675	1.0252539	1.085843	1.1710409	1.1247085	1.6024273	1.8147745	1.6903733	1.4308733	1.381384	1.6210848	1.2306056	1.2250284
Phase-1 RCT-12	0.89071417	0.95065347	0.8827247	0.9364858	0.8661281	0.9665308	0.9927398	0.95144794	1.1782383	1.0025393	0.81166875	1.0241168	1.1132532
Phase-1 RCT-152	1.0721988	1.2248434	1.0150906	0.9746005	1.0861968	1.2149022	1.2562029	1.3281392	1.2118232	1.3410849	1.4342045	1.26242	0.9885881
14-3-3 zeta	0.9113564	1.1258973	0.74722356	0.78937995	0.860871	0.6815791	0.76545853	0.6005382	0.8367623	0.8034777	0.8587055	0.6547896	0.7245085
Cytochrome P450 2C23	0.96772325	0.9878281	1.0370538	1.0110915	1.0163696	1.4791473	1.2455173	1.2403063	1.4447078	1.2571138	1.0267018	0.6478021	0.9184045
Voltage-dependent anion channel 2 (Vdac2)	1.0677317	1.0480802	0.8881344	0.95676160	0.88104477	0.62648447	0.9249573	0.9491705	0.8559859	0.9516822	1.1172873	1.0397681	0.92259085
Phase-1 RCT-154	1.2121351	1.1491693	1.2256105	1.2292718	1.1217158	1.6086556	1.2944945	1.2167249	1.2846608	1.2880502	1.1302496	1.2395401	1.2395401
Superoxide dismutase Mn	0.9559428	1.38997	0.96407896	1.0781676	1.0153041	0.9895844	1.0307853	1.1125144	1.0040484	0.90788543	0.737479	1.214463	1.1781544
c-myc	1.1654598	0.9112936	0.88870233	0.9413985	0.9809386	1.163898	0.86707354	0.9383264	1.0775817	0.8467623	0.90727815	0.6534543	0.8656597
Cydn G	0.95917556	1.1060354	1.0818172	1.2356483	1.124838	1.0739167	1.0439327	1.0286666	1.024409	0.8748565	1.0286954	1.3611098	1.0286127
Calgranulin B5	1.0286484	1.167374	1.0079798	1.0723866	1.0189053	0.9943952	1.0282724	1.0632313	0.8665779	0.8625328	1.0595893	1.051778	1.1800286
p53	1.0384511	1.0834016	0.99630743	0.93898235	0.87028714	0.80462956	0.82594377	0.84280684	0.748112	0.9414868	1.0803164	1.0822004	1.0618148
Phase-1 RCT-205	1.0224509	1.0291259	0.9850021	0.975351	0.99810555	0.81603937	0.976715	1.0291564	0.9717854	0.94104564	1.0489849	1.0237417	1.0237417
Phase-1 RCT-68	1.068446	1.160955	1.0912114	1.0918872	1.1003314	1.2863946	1.2135209	1.1382263	1.0011362	1.011729	0.9167155	0.9658036	0.908466
Caspase 3	0.912883	1.0762859	0.9556569	0.87188445	1.0251124	1.6552763	0.8432427	1.398284	0.8342526	0.8217476	0.9178803	0.97616273	1.04266
Alpha-tubulin	0.8759767	0.9851332	1.0509107	1.2716002	1.247476	0.6946344	0.7208955	1.093667	0.76501805	1.14213	1.0583581	0.9328755	1.3576531
Ribosomal protein L19a	1.0184661	1.0735252	1.131284	1.1947376	1.1418557	1.1540726	1.1774577	1.100299	0.8147422	0.9426771	1.0894018	1.0544791	1.076287
IgE binding protein	1.0171276	0.94852364	0.95128024	0.9884548	1.0912433	0.9948466	1.0022893	0.9389134	0.83943444	0.8658152	0.8765272	0.88136805	1.137184
Phase-1 RCT-39	0.96462244	0.94752676	1.0064694	1.0041528	1.0701339	1.216671	0.84552916	1.0215228	0.80562426	0.95496786	0.9286254	1.1317202	0.97557044
Cofilin	1.0633428	1.0094491	1.0079721	0.8864797	0.95491165	0.890248	1.1728666	1.0572165	1.1250281	1.026212	1.3418705	0.6973916	0.85122484
Heme oxygenase	1.0019885	0.9881182	0.98663825	0.92352235	0.87704355	1.2603838	1.0491647	0.988744	1.2614184	1.0915878	0.8411505	0.8865741	0.7565285
Phase-1 RCT-241	1.0146104	1.0772859	1.0003359	1.3326259	1.1794724	0.7512681	0.9577642	0.9198793	0.7921688	0.8066028	0.884166	1.2144864	0.9397847
Ribosomal protein S9	0.9434375	1.069831	0.78742987	1.0027409	1.016663	0.7851292	0.75079256	0.8315102	0.7200231	0.9332525	0.95334464	0.93480408	1.027139
Phase-1 RCT-258	1.0386927	0.8617155	0.964348	0.8884153	0.9675319	0.8763584	1.0726936	0.890467	0.8304324	0.9378235	1.1221821	0.8851441	1.0022857
Argininosuccinate lyase	0.98188185	1.027936	1.092242	1.0297331	1.0518974	1.0807059	1.1744771	1.744718	1.77208	1.5138764	1.3133042	0.659266	0.83425707
Phase-1 RCT-160	0.9602226	1.1055995	0.8750552	1.240223	1.084052	1.2287831	0.2865108	1.052949	0.9815987	1.0810274	1.1543063	0.90504254	1.0307662
Multidrug resistant protein-1	1.0068806	1.0287322	1.0514954	1.0451125	1.0121155	1.4859279	1.8504433	1.657082	1.4980856	1.4844847	1.158337	1.0745623	1.0417026
Omitline decarboxylase	0.85112405	1.0368938	1.097515	1.0889164	1.1012329	1.2517274	1.2817274	1.0678945	1.0521027	1.4438003	1.2171278	1.1721862	0.7989374
Thymosin beta-10	1.091519	1.1353533	0.9748127	1.0806087	1.0975269	0.91042185	0.92111206	0.9949377	1.0273925	0.7772508	0.86284368	0.87978721	0.98489865
Phase-1 RCT-72	0.9248243	1.1368372	0.88524103	0.95180275	0.86610436	1.1842821	0.8840371	0.8742848	0.7452941	0.8772508	0.86284368	0.87978721	0.98489865
Phase-1 RCT-169	0.88483662	1.0069788	1.0628793	1.1692456	1.0970207	0.9470659	1.0204607	1.0680451	1.0024981	0.9742486	0.92259838	1.0363775	1.1446784
Phase-1 RCT-76	1.0451913	1.125259	1.0650586	0.939274	1.0518935	0.8917801	0.83458784	0.9385833	1.003346	0.9634235	1.115407	0.92896545	0.8697575
Vacuole membrane protein 1	0.9724012	0.72208176	0.7424507	0.7878682	0.7628306	0.7632554	0.855981	0.9807259	1.3968848	0.9348358	0.91543067	0.7742209	0.80894107

Table 28

Phase-1 RCT-158	1.0148227	1.1017035	0.9560567	1.0565519	1.050628	0.8269328	0.9294894	0.9539334	0.8625688	0.7610742	0.9258605	1.101884	0.8018351
Phase-1 RCT-113	1.096048	1.0668063	0.9750057	1.006209	1.1416544	0.83089485	1.1708588	1.0635501	1.0976993	0.1593226	1.294076	1.1406335	1.0075788
Endogenous retroviral sequence, 5' and 3'	1.1640471	1.1201609	1.1097418	0.9736523	1.0721242	0.8431126	1.1513983	1.1397002	1.2980335	1.1588854	0.97091283	1.1878352	0.9263333
LTR													
Beta-actin	0.9972981	1.0493242	0.9683816	1.1216848	0.9036032	1.4153093	1.4022264	2.1853273	1.7297508	1.8880908	2.549134	0.83648014	0.80573978
Phase-1 RCT-65	0.9494342	0.94576836	0.98488736	1.0945808	1.0576874	2.2428832	1.6070827	1.7894816	1.481797	1.6407164	1.671033	1.1258929	1.1501768
MHC class I antigen RT1.A1(f) alpha-chain	1.038332	1.0886954	1.2294574	1.3138031	1.3111023	3.1077993	2.389128	2.8621804	1.7928787	1.7893361	2.3595812	1.105002	1.4922567
Bax (alpha)	0.9440556	1.2334515	1.1071482	1.2510041	1.1127865	1.4875487	1.5159564	1.5562704	1.2511872	1.2055025	1.0271883	1.0757004	0.5069394
Carbonyl reductase	1.0187141	0.9993188	1.0549412	1.1398708	1.0944912	0.8984652	0.98174006	1.104053	0.80368594	0.8892885	0.98023885	1.0604358	1.1759313
Beta-actin, sequence 2	1.0589271	0.9653406	0.98712844	1.0218853	0.9095838	0.98881605	1.2081767	1.4545853	1.0725745	1.1902238	1.9585577	0.8537802	0.86911565
Interleukin-10	1.009957	1.412209	1.458768	1.1564538	1.1939654	1.3599602	1.1935737	1.3302443	1.1726573	1.1031252	1.2104101	1.3249478	1.5959088
Phase-1 RCT-191	1.0046977	1.0657682	1.0659876	1.2278448	1.1384936	1.3972139	1.4883541	1.5967498	1.7349277	1.4681182	1.6392224	1.2335364	1.3052152
Phase-1 RCT-111	1.104604	1.1510418	1.0445653	1.044127	0.8934543	1.1731734	1.2148687	1.118674	0.9114432	0.8494413	0.98818286	0.8841388	0.89202873
Apoptosis-regulating basic protein	1.0422335	0.7650989	0.8277252	0.7418714	0.8294888	0.7627688	0.7184356	0.91304314	0.814944	0.9973477	0.7396288	0.69565164	0.7437184
Glutathione peroxidase	0.89220715	0.9961495	0.9239338	0.739487	0.7011335	0.87498546	0.9864595	0.89231138	0.84944	0.8639175	0.8632534	0.722773	1.018841
Phase-1 RCT-239	0.88775057	1.1310729	0.89562657	0.8545893	1	1.5003666	1.5613377	1.1344893	0.73392754	0.81689179	0.96300336	1.1478316	0.8662066
Phase-1 RCT-67	1.0162293	1.0597017	0.90366764	0.9682561	0.82843	0.92521626	0.92521626	0.9638871	0.81231797	0.86500336	1.0722773	0.722773	1.018841
Tryptophan hydroxylase	0.9912008	0.9446228	1.0285365	1.0066165	1.268107	1.2218016	1.00305	1.0253415	1.0506289	1.1031252	0.82768455	0.9799706	1.3011048
Sulfotransferase K2	1.2202895	1.4116209	1.017352	1.0524894	1.0992692	1.2115085	1.1928862	1.6747054	1.3560867	1.3912495	1.11904	0.8514434	0.63924688
Calgranulin B9	0.97828624	0.99737465	0.80088285	0.941839	0.92991155	0.9477875	1.1068775	0.96327814	0.8944177	0.8982853	1.13858	1.0642334	1.1278411
Phase-1 RCT-123	1.0025271	0.7849307	0.95635404	1.068137	1.1618915	1.0668241	1.1263138	1.0389081	0.74677736	0.85181147	0.8713485	1.038029	0.89028795
Phase-1 RCT-88	1.0888531	0.94877964	1.0214226	1.0007124	0.97912804	1.1254911	1.1263138	1.0389081	0.8544118	0.8630268	0.8510435	1.0164827	1.0093462
Aquaporin-3 (AQP3)	1.0189194	1.0360376	0.85912268	0.8851961	0.8776556	0.9964916	0.9565368	0.66902704	0.8788557	0.90781968	0.88836455	0.9508794	1.1489886
Succinyl-CoA desaturase, liver	0.41482365	0.45271632	0.7603276	0.27869167	0.2332206	0.32892884	0.34878445	0.7973154	1.0890737	0.5941888	0.84396516	4.4283376	3.4589888
Phase-1 RCT-84	1.0495886	1.1683632	1.2218469	1.2218469	1.1078914	1.2762226	1.3449407	1.3484228	1.552117	1.1919003	1.1007786	1.1950738	1.4807433
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 5).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-no;													
necrosis observed; yes-both; necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 6 and as													
included in Table 26)													

Table 29

Table 29. Expression Data for 24 Hour Timepoint (1)															
Compound-Dose (2)	TAM 50	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200	TAM 200
Animal Number (3)	1449	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467
Liver Toxicity Inflammation Classification (4)															
Gene Name (5)															
Gammah-actin, cytoplasmic	0.99201164	1.7031103	1.2575493	1.1315999	1.053749	1.062037	2.0713988	1.9659448	2.314688	0.8571483	0.94345105	0.74172785			
Phase-1 RCT-145	0.93507063	1.0473597	1.0428456	1.2281488	0.8909763	0.9208353	1.9883407	2.7969778	1.557653	0.89913857	0.9074849	1.0265571			
Gadd45	1.4569992	1.3178833	1.3822433	1.186902	1.186446	1.2554524	2.2439951	2.4440973	1.897707	1.3429922	1.1350304	1.0490302			
Phase-1 RCT-78	1.0250294	0.8199514	0.8129773	0.72549325	0.83954036	0.9720206	0.95642394	0.6965786	0.70472795	0.69243884	1.118132	1.268272			
Fas antigen	1.0973803	1.174203	1.0758435	0.8529435	1.0978316	1.0605206	1.1654768	1.9717089	1.2646663	1.5546567	1.1202882	0.851632	0.9207287		
Macrophage inflammatory protein-2 alpha	1.1070485	1.1789877	1.0694593	1.1861312	1.7839762	1.1077511	1.1559897	2.1031275	1.884826	1.3847436	0.7262856	0.7968088	0.9077867		
Interferon beta 1	1.3333787	1.5783515	1.2128258	1.3669188	0.88022986	0.8904718	1.1376752	3.420328	1.822498	1.3494806	0.6940133	0.8970986	0.9560088		
Phase-1 RCT-207	0.67633957	0.84700304	1.0251136	0.98116545	0.9303474	0.9151595	0.7950744	1.4611253	1.3494806	1.3248067	0.6940133	0.8970986	0.9560088		
Aspartate aminotransferase, mitochondrial	1.2569892	1.2247158	0.805809	1.2191547	0.62597823	0.7205463	1.0824404	0.99761397	0.8021292	0.9410921	0.85946555	0.9607897	0.9932134		
Caspase-1	0.9665749	0.8575304	1.0436363	1.0603255	1.2021578	1.1303147	0.9872475	0.90527847	0.9187243	0.5447811	0.4622656	0.8150404	0.42351055		
Malic enzyme	0.7524729	0.6148094	0.95205146	1.170069	0.8672475	1.0411105	1.0749074	0.4822656	0.8150404	0.42351055	0.742114	1.0707332	1.0471607		
Phase-1 RCT-30	0.7537535	1.3599959	1.0162674	1.3474758	0.9504975	1.0733263	0.8016349	1.0847473	1.2642628	1.0618539	1.1750894	0.8619058	0.8623823	1.0268801	
Hepatocyte growth factor receptor	1.0612104	1.3811922	0.9681044	1.5602373	0.9575723	0.8280167	0.89454734	2.4855893	1.4102533	1.6989858	0.6504942	0.861832	0.9337852		
MAP kinase kinase	0.8949049	1.1268015	1.020488	0.92458797	0.9330278	1.0411574	1.014422	2.2018175	1.3055642	1.3567065	1.0728512	1.2917285	1.2935214		
Sodium/glucose cotransporter 1	0.9577782	0.8363542	0.9577091	1.46681823	0.35073878	1.178594	0.74359573	0.93861506	0.18641631	0.5094239	0.6534078	1.8879105	2.4834259		
Phase-1 RCT-60	0.9577782	0.8363542	0.9577091	1.46681823	0.35073878	1.178594	0.74359573	0.93861506	0.18641631	0.5094239	0.6534078	1.8879105	2.4834259		
Phase-1 RCT-192	1.1551164	2.2982483	0.92274636	1.241424	0.99031027	1.1052252	1.0899551	2.843858	0.4622656	0.8150404	0.42351055	0.742114	1.0707332		
Phase-1 RCT-288	0.8446645	0.77348465	0.8588396	0.6801653	0.81535685	0.8493387	1.0087418	0.7827957	1.0508914	1.0712928	0.9312688	1.1018078	1.0887365		
Phase-1 RCT-37	1.031145	1.0543014	1.124242	1.078693	1.1564903	1.1590062	1.1071378	2.0552845	1.807621	2.120729	0.9312688	1.1018078	1.0887365		
Organic cation transporter 3	1.1148312	1.3936602	0.87230035	1.4274712	0.99020106	1.1296357	0.9844179	3.607207	2.8135083	3.2252228	1.1050878	1.0325091	1.020535		
60S ribosomal protein L6	1.0307005	1.2634026	0.8204013	1.3567817	0.8240581	1.1452229	0.9096289	3.6433968	2.9608984	3.0682132	1.1050878	1.0325091	1.020535		
Zinc finger protein	0.7149463	0.5634595	0.9497678	0.7628433	1.6210169	0.8404312	0.9309457	1.0913143	1.8628808	1.0697465	0.9977491	0.8035369	0.9846456		
Calgranulin B2	0.93627477	1.1230171	0.977352	1.126831	0.8873859	0.8775555	0.8187243	0.98096895	1.0871216	0.8573038	1.0238497	1.0365173	1.0886827		
ID-1	1.0457174	1.2613565	1.179812	1.383273	1.1593478	1.1525378	1.184348	1.195102	1.195102	1.224189	1.01096	0.7902851	0.99368266		
Phase-1 RCT-42	0.8701373	0.7643873	0.938776	0.7046616	0.87622535	1.2105178	1.0251029	0.2600558	0.43972868	0.472469	1.222895	1.1729012	1.20554		
Phase-1 RCT-115	2.165461	1.3439259	0.7349602	1.1269975	0.8383058	1.0694237	0.9625129	0.9625129	0.9578757	1.1543208	0.85765558	0.97727414	0.9943602		
Matrin F/G	1.176945	1.19349	0.5028281	0.92163384	0.8298224	0.49227333	0.6502254	1.9484965	1.0531172	1.980102	0.74083306	0.75536233	0.9146896		
Soritinol dehydrogenase	1.1664941	1.6184051	1.0349053	1.182053	1.9637834	1.1017714	1.1121399	1.109274	0.7390515	1.1980102	0.74083306	0.75536233	0.9146896		
Phase-1 RCT-24	1.321648	1.2381665	1.0375878	1.1051328	0.8694637	0.6292295	0.6913829	1.8608724	1.3188127	1.469974	1.0716854	0.10529708	1.2609783		
Calgranulin B1	0.9612051	1.0820181	0.7111693	0.8008331	0.9886128	0.90811947	0.7721649	3.0029864	2.1054109	3.040404	1.2716892	0.8325455	1.190877		
Elongation factor-1 alpha	0.8455209	0.4604825	0.4199152	0.46915105	0.5339328	0.7025735	0.8285389	0.3512681	0.32115035	0.49372524	1.0358339	1.2701422	1.8550367		
L-glutono-gamma-factone oxidase	1.2020285	0.94409466	0.9733916	0.8884465	0.846858	0.7611661	0.98826145	0.5256491	0.36780813	0.692952	1.4068302	1.1922166	1.4347286		
Phase-1 RCT-33	1.0699564	1.063707	1.1387874	1.0353014	0.93483925	0.8071801	0.93102336	1.1737627	0.6586048	0.6586048	0.6586048	0.6586048	0.6586048		
C-Jun	1.1762605	0.7496872	0.9724723	0.79583706	1.1188837	1.0213228	1.0845454	0.44495948	0.66784686	0.8887871	0.7341829	1.1042011	1.176111		
Phase-1 RCT-233	1.0531124	0.9535784	1.0121739	0.8263562	1.192073	0.9612393	1.0190331	0.6294950	0.6062664	0.7238615	0.9351995	0.8527405	0.9883307		
Phase-1 RCT-36	0.93828326	1.0475909	1.0915982	1.2243562	1.102073	1.0051116	0.8620614	0.850143	0.7856751	0.7856751	0.7856751	0.7856751	0.7856751		
Phase-1 RCT-181	0.7894807	0.8511692	0.74120313	0.9097847	0.5941119	0.8436048	0.5985812	0.3668154	0.47348728	0.47348728	0.47348728	0.47348728	0.47348728		
Phase-1 RCT-185	0.93312838	0.9276677	0.97054533	0.74742454	0.5941119	0.8436048	0.5985812	0.3668154	0.47348728	0.47348728	0.47348728	0.47348728	0.47348728		
Phase-1 RCT-179	0.9123146	1.1822181	0.92862914	1.1227076	0.7020797	0.8668624	1.073728	3.515933	2.335603	2.335603	2.335603	2.335603	2.335603		
Phase-1 RCT-144	0.8684932	0.99351408	1.0238136	1.1833059	1.1989006	0.9762239	1.1173804	2.2818992	1.3661512	2.0755541	0.947865	1.1736759	1.1615802		
IkB-α	1.3635526	1.487841	0.5367631	1.1714481	0.7433963	0.7902769	0.89703706	1.452286	1.3661512	2.0755541	0.947865	1.1736759	1.1615802		
Phase-1 RCT-225	0.8894386	1.436246	1.0092889	1.0081178	1.0081178	0.98304605	1.0380981	1.0973544	0.9158313	0.9158313	0.9158313	0.9158313	0.9158313		
60S ribosomal protein L5 (alternato clone 1)	1.1312357	1.3510758	1.0257547	1.2487425	1.0604772	1.2770531	1.033274	2.5557644	2.4428927	2.4428927	2.4428927	2.4428927	2.4428927		
Beta-tubulin, class I	1.3134574	1.9180927	1.1745454	1.0745448	1.0178892	0.7678859	0.8845173	1.6342669	1.0425073	1.8465117	1.1768669	0.9050277	1.01372		
Multidrug resistant protein-2	0.6886776	0.7485015	1.0400575	1.3277781	0.93036574	1.0131334	0.897302	2.29267	2.0402007	2.0502715	0.82700235	0.8308448	1.0227686		

Table 29

Phase-1 RCT-49	0.968748	0.9202781	0.98477165	1.0089515	0.95272875	1.027578	1.0516976	1.093939	3.1215978	1.2191465	0.8958889	0.87178733
Cellgranulin B3	0.86502814	0.9718465	0.97505072	0.9718465	0.93745553	0.85711575	0.85533695	1.6935531	2.1802568	1.4635438	0.9400621	0.94959795
NADP-dependent isocitrate dehydrogenase	1.0753986	1.0433903	0.97304078	0.75952343	1.0562282	0.9466958	0.9641026	0.59619534	0.8305724	0.84586464	0.7951672	1.0307186
Cytochrome	0.85628456	0.9568953	1.2141957	1.022785	1.2343495	1.0646747	1.0681308	0.61557007	0.6776246	0.46791026	0.814683	1.076334
Oxamate binding protein 1	0.8621706	0.87378594	0.8454248	0.46853524	0.90118384	1.0466179	0.8405446	0.2282377	0.37797528	0.27032254	1.0467303	1.1564686
Sodium/bile acid cotransporter	1.0001704	0.8615803	0.75630987	0.92778653	0.8719833	1.0057638	0.84539486	0.67280586	1.0694826	0.7607431	1.0262631	1.0439223
Phase-1 RCT-174	1.075081	0.0489069	0.645126	0.918779	0.74895835	1.00348	0.84765226	0.60020198	0.8813278	0.7609864	1.3064134	1.0709888
Phase-1 RCT-77	0.9260356	0.8897354	0.32711095	0.33097288	0.33829197	0.727333	0.5220181	0.57324185	0.41337436	0.53399186	1.2368328	0.80347868
Inositol polyphosphate multikinase (pmk4)	1.428323	0.905609	0.49722555	0.58303237	0.5910049	0.84161868	0.5667403	0.60161316	0.41067332	0.567182	1.3900094	1.2689505
Phase-1 RCT-256	0.9187825	0.82146224	1.0908736	0.8289661	1.0384693	0.86047435	1.0107527	0.3926923	0.376743	0.4083329	1.0045701	1.1335163
Equilibrative nucleoside/nucleosine-sensitive	1.049373	0.9054209	0.9859275	0.7946484	0.8033509	0.98491687	1.1287616	1.4740661	1.1097894	1.2821772	1.1757312	1.0756582
CDK102	0.7101627	0.8181481	0.8562169	0.8645480	0.87403687	1.0384351	0.8221581	0.958732	0.76489	0.82165704	0.9747459	1.0125495
Phase-1 RCT-208	0.8793797	0.8842156	0.389714	0.58123934	0.58420914	0.8560046	0.5816122	0.4476457	0.5633813	0.64516866	1.0696733	1.1524508
NADH-cytochrome b5 reductase	1.1650372	0.9384287	1.0420673	0.88690004	1.1586547	0.7389262	1.2310212	0.50210893	0.69889594	0.7320942	0.8534897	1.0844503
Dynamin1 (D100)	0.86482496	0.8456749	1.1193988	0.78994305	0.89694816	0.92818725	0.8445434	0.3265905	0.510742	0.47568146	1.6874626	1.2571316
Senescence marker protein-30	0.84741855	0.6536114	0.9911638	0.86011655	1.0801469	0.84807595	0.93847444	0.7967938	0.7044188	0.89628247	1.0376289	0.9263305
Phase-1 RCT-89	1.4468023	0.7905312	0.9577902	0.7256756	0.95142484	0.95480615	1.0544271	0.59422494	0.3884911	0.49713748	1.1915879	0.99414116
Carbamate partitioning-CoA transferase	1.073022	0.9678986	0.557823	0.5640532	0.4578113	0.42665367	0.37085348	0.42468986	0.21964278	1.3423185	2.408795	1.0644554
Alpha-2-microglobulin	1.0312359	0.7388774	0.5088157	0.89497395	0.43643034	0.6350741	0.5293385	0.40941474	0.45847124	0.4560681	1.2366505	1.0914648
Apolipoprotein CIII	0.5572593	0.87031025	1.3191684	1.007172	1.1904118	1.1133437	1.078593	0.517635	3.708211	0.6755338	0.93818516	1.0897897
Cathepsin L, sequences 2	1.6559703	3.8801732	1.0955677	3.6167192	1.3461078	1.609731	1.1747656	5.0488195	6.801598	3.420528	2.2123263	1.23522
Phase-1 RCT-141	1.1889156	0.6645095	0.7563577	0.5340777	0.60270065	0.6848673	0.87024183	0.65983578	0.6745221	0.665208	1.2084516	1.2183172
Phase-1 RCT-288	1.3243335	1.2183398	1.063722	1.5312884	1.3390218	1.2940159	1.2755429	1.3076108	1.0783933	1.3807646	0.05053703	0.84074265
Endothelin-1	1.0068868	0.855065	1.0638406	1.1409471	1.0793868	1.027897	1.0801852	0.9663536	1.134221	0.94630978	0.9013979	0.9140718
Phase-1 RCT-140	0.7818865	0.9147931	0.9929458	1.028914	0.8509767	1.2939171	1.3231192	1.1873889	0.8609597	1.1141898	0.86515933	0.932773
Cyclin D1	0.7777173	0.7763005	0.8320938	1.0610814	0.6901172	0.7155705	0.70915345	1.0860275	0.8517447	0.792268	0.87765036	1.1747073
Phase-1 RCT-282	1.0180987	0.89864725	0.9973967	0.739282	1.058281	0.81891827	1.087963	1.3943143	0.98728013	1.0257884	1.0518631	0.8516503
Phase-1 RCT-287	0.9339507	1.0696669	0.8363305	0.879952	0.96814115	0.8770656	0.90189284	1.0013681	0.74839658	0.7718612	0.8498191	0.8498191
Retinol-binding protein (RBP)	0.85965943	0.7107024	0.62488207	0.599135	0.6007675	1.0275147	1.923784	1.4509465	1.3851302	1.305662	1.4080551	0.9880384
ATP-stimulated glucocorticoid-receptor	0.7313584	0.8595193	0.9170622	0.6837544	0.8069239	0.819640326	1.8486563	1.8663523	1.5077685	0.854223	0.97052865	1.0555563
transcriptional promoter (Gyk)	1.0318365	1.2154095	1.1651652	1.2784652	1.2487835	0.967885	1.0371343	1.9985389	2.6421278	1.7978002	1.2210072	0.8988777
Phase-1 RCT-30	1.0507381	1.0070374	1.437368	0.9443246	1.3722693	1.1649499	1.1174672	3.2084875	0.9033688	2.4848018	0.88881433	0.9258922
Pyruvate kinase, muscle	0.8651572	1.0979791	1.0126141	1.0489286	1.110788	1.0540023	1.1270181	2.3314483	3.399191	2.498675	0.907394	0.9138887
PAAR interacting protein	1.6332766	1.7183323	1.0877124	1.2787884	0.9281398	1.2568152	0.84441894	2.4673586	2.4651	2.4346757	0.8145323	0.8761722
Nucleoside diphosphate kinase beta isoform	0.9985122	1.2487975	1.1220378	1.2855377	1.0411322	0.9968973	0.48500437	4.319167	8.1349554	3.1438622	0.9811388	0.81950825
Gadd153	1.4516193	2.1253257	2.1676147	1.0855926	2.0790665	1.0016104	0.8342521	5.5840554	14.986745	4.352973	0.7622852	1.0424801
Insulin-like growth factor binding protein 1	1.1278541	0.7950777	0.8876363	0.84543183	0.8813387	0.7116705	0.8005546	2.0273306	0.58901326	2.4432003	1.0628784	0.9831505
C-H-88	0.7870834	0.82254595	1.047384	0.7346416	1.050825	0.9882662	0.8826349	0.2843599	0.26780114	0.3148257	1.1651704	1.3237303
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.89005744	0.84417987	0.80701294	0.60503954	0.79989837	1.2129031	1.1393539	0.62100935	0.2498083	0.64823264	1.7236444	0.84558395
Phase-1 RCT-62	0.8462793	0.41122988	0.35537355	0.3688589	0.39904377	0.83035773	0.43842814	0.40482276	0.43732518	0.36935916	0.5835839	1.0218555
Alpha-1-inhibitor III	1.2528373	1.3138193	0.8314286	0.9293426	0.3562285	0.67101836	0.5245183	0.4018148	0.5595958	0.5469371	1.6840054	1.2033328
Sterol carrier protein 2	0.75679845	0.76578365	0.4937088	1.1925417	1.5349834	1.2177473	1.1440438	0.7201845	0.2666372	0.58070367	0.6972095	0.8425502
Organic anion transporter 3	1.1710646	1.4558505	0.9740449	1.0384117	0.89437374	1.137895	1.1530548	0.58340776	0.394233	0.69903684	0.71161383	0.7878216
Calgranulin B4	0.9107778	0.74899894	0.64846798	0.7205959	0.6565755	1.0623275	0.7939815	0.4417892	0.5780773	0.67217108	1.1681099	1.922378
Phase-1 RCT-182	1.183931	0.9904782	0.7616685	0.793792	0.6397116	0.7828183	0.9707365	0.3240925	0.8410704	0.58894306	1.1840374	1.0146987
Calgranulin B3	1.0746405	0.78431946	0.7035375	0.6195416	0.997328	0.9005162	0.71235675	0.6208947	0.41242824	0.90134555	1.4640431	1.258482
Aldehyde dehydrogenase, microsomal	1.3001161	0.9341075	0.8506286	0.72716653	0.83087486	0.8511146	0.97045326	0.4456216	0.5020827	0.69521377	0.7791073	1.2484958
Phase-1 RCT-128	0.34527932	0.45880455	0.8512948	0.4304971	1.0818418	1.0663034	0.9520081	0.5187646	0.22828219	0.69521377	0.7791073	1.2484958
Phase-1 RCT-102	0.8651336	0.6532855	0.3538943	0.428413	0.43106142	0.327345	0.4922662	0.5001986	0.58087915	0.5408063	1.0950779	0.9115477
Preproalbumin, sequence 2	0.86428423	0.69686913	0.7737243	0.5727433	0.808163	0.7009384	0.57113785	0.39552363	0.1039712	0.11245718	0.80121924	1.0606915
Phase-1 RCT-10	0.86428423	0.69686913	0.7737243	0.5727433	0.808163	0.7009384	0.57113785	0.39552363	0.1039712	0.11245718	0.80121924	1.0606915
Phase-1 RCT-46	0.88860977	0.7765077	0.77271687	0.75594676	0.7794604	0.717387	0.8003215	1.5474547	0.7114308	1.2684908	1.3074283	0.8602011
Phase-1 RCT-8	0.89157385	0.88120795	0.3722096	0.48692077	0.4329227	0.6280648	0.54584744	0.55534744	0.5901651	1.1282553	1.3091687	0.90584344

Table 29

Phase-1 RCT-168	1.4312359	0.9716588	0.85150564	0.8848261	0.98503046	0.909271	0.98926024	0.66115848	0.64501085	0.8431302	1.347934	1.2113774	1.4237919
Phase-1 RCT-169	0.599474	0.7434347	1.7289752	0.8906372	1.8759294	1.2718333	1.1560131	0.28780186	0.6176907	0.39787993	1.1241272	1.0079953	1.0481265
Beta-elanine synthase	0.8409018	0.8224534	0.68339753	1	0.5797571	1.1892672	0.4979242	1.4456936	0.79223266	1.0178907	1.1714356	1.0206802	0.60267043
Phase-1 RCT-170	0.91664336	0.6471065	1.3524258	0.3842187	0.73510903	1.1892672	0.4979242	1.4456936	0.79223266	1.0178907	1.1714356	1.0206802	0.60267043
Carbonic anhydrase III	0.9830639	0.45347888	0.30315575	0.75098847	0.90628886	0.31189206	0.5052283	0.35449938	0.24109093	0.8723914	1.24538425	1.304826	1.2325225
Phase-1 RCT-171	1.1316181	0.8774033	1.033975	0.79798883	0.74529505	0.8920863	0.989139	0.802847	0.015505933	0.062394425	1.824037	1.8974911	1.184391
Carbonic anhydrase III, sequence 2	0.4981877	0.6340054	0.65785183	0.6837576	0.45893747	1.3887875	0.90282667	0.13030203	0.27015242	0.7641058	1.5617844	1.1348339	1.0854533
Phase-1 RCT-172	1.0376547	0.7690435	0.89565835	0.72362204	1.028608	0.8843827	0.8204905	0.56588453	0.22911559	0.7832426	0.8935287	1.2083158	1.4889833
HLG-CoA synthase, mitochondrial	1.8602396	0.6891152	0.8417934	0.46833187	0.59493125	0.7263981	0.8120519	0.69297767	0.7738474	0.6023712	0.7723867	0.9001084	0.89893477
Phase-1 RCT-169	1.0086601	0.86216925	0.9525803	0.69898095	0.61827168	0.7131698	0.516619	0.715351	0.9634056	0.9121578	1.2801281	1.0547429	0.89159724
Phase-1 RCT-170	0.95165345	0.9525803	0.9525803	0.69898095	0.61827168	0.7131698	0.516619	0.715351	0.9634056	0.9121578	1.2801281	1.0547429	0.89159724
Urinary protein 2 precursor	0.9146261	1.088848	0.8175207	0.7911507	0.70803034	-1.0739669	0.77531284	0.82637113	0.6378441	0.7407968	0.9397186	1.205393	0.98159724
Paraoxonase 1	0.8813729	0.5616092	0.8349367	0.6425602	0.54607505	0.9092591	0.686443	0.7047467	0.6435435	0.58866954	1.114846	1.117527	1.0778529
Liver fatty acid binding protein	0.87833184	0.7253481	0.85989084	0.67234617	0.40830024	0.88589043	0.5730922	0.36734495	0.18831964	0.18752265	1.0042108	1.0051203	0.7508856
Phase-1 RCT-171	0.893194	0.4076565	0.3724887	0.3402784	0.3952737	0.90945198	0.4593558	0.3978414	0.45933774	0.3532867	0.6194165	0.833715	0.730748
Phase-1 RCT-172	1.4148434	0.9780336	0.9595794	0.7466897	0.50293124	0.8178582	0.5394413	0.48665962	0.39210489	0.5153089	0.929687	1.0547317	1.3534489
Phase-1 RCT-173	1.2588648	0.80782604	0.9589037	1.054815	0.6542483	0.8770163	0.9423257	0.84181597	0.56527764	1.068178	1.128372	1.0547317	1.3534489
Transferrin	0.76870203	0.631298	0.28876987	0.25887788	0.2709392	0.60296863	0.3738904	0.48555225	0.34204984	0.440925	1.0732299	1.2006359	0.7801817
Hepatic lipase	0.98958889	1.0259303	0.91407144	0.81146157	1.2050674	0.8861831	0.82217395	0.30945966	0.33132225	0.33757845	0.9864983	1.13921	0.8597364
Oxochromone P450 11A1	0.83782536	0.46511787	0.0861983	0.6453108	1.3182738	1.166333	1.1662962	0.3550728	0.38484	0.30262575	0.9178693	1.824593	1.0819167
Phase-1 RCT-175	0.8212492	0.8651257	0.6468104	0.7309532	0.56543254	0.894003	0.7207174	1.0874987	0.8071071	0.87723064	1.3743468	1.1687477	1.952792
Phase-1 RCT-176	0.8779927	0.8376597	1.213158	0.8045321	0.76010978	0.8523308	0.8523308	0.8523308	0.8523308	0.8523308	1.5250462	0.8523308	0.8523308
Phase-1 RCT-177	1.3151113	1.4324816	0.907442	1.1420352	0.58068044	0.91352236	0.695994	1.0044543	0.8107134	0.94017386	1.2188823	1.2581524	1.0157623
Phase-1 RCT-178	0.8099743	0.895231	1.006887	0.93458724	1.0849781	1.1741955	0.9064989	1.6761239	0.8907697	1.1217319	0.8408794	0.8241387	0.8342007
Phase-1 RCT-179	1.2145756	1.4506999	0.2586902	0.5531039	1.0736148	0.84114105	1.0288844	1.478154	0.98620459	1.6113869	1.2585054	0.9229129	1.0069523
Phase-1 RCT-180	1.0780983	1.7324983	1.0684618	1.5908669	1.4661826	1.4455384	0.9931613	3.4195673	3.464468	3.2163763	1.2835128	1.083982	1.5447789
14-3-3 zeta	1.1817652	1.2847178	1.0583912	1.4891407	1.2425185	1.583824	1.2175926	2.0383289	1.2583533	1.6589125	0.78078	0.9403358	1.047875
Oxochromone P450 2C23	0.52736974	0.5885685	0.7970021	0.3355989	0.84871868	0.8718938	0.987718	0.6910441	1.0077412	0.9869499	0.93552214	1.1707373	0.8670412
Voltage-dependent anion channel 2 (Vdac2)	1.0476874	1.1535925	0.9683782	0.7689385	0.7600757	0.8228181	2.1300748	1.9594999	1.300492	1.1593333	1.3942819	1.1593333	1.3942819
Phase-1 RCT-154	1	1.0105553	0.98118056	0.8420867	1.0086339	0.98138364	2.04064	2.2405696	1.6208718	1.0238444	1.0238444	1.0446244	1.0446244
Superoxide dismutase Mn	1.1978778	1.468042	3.060773	0.892983	1.2285683	0.92855934	0.7700395	2.8805702	1.2925397	2.1879284	1.3848544	1.0474403	1.0844368
c-myc	1.054029	1.2253023	1.0831221	1.1514273	1.2483163	0.7256782	1.3030569	3.2104088	3.6104088	1.6786997	0.88685705	0.948236	1.2428418
Phase-1 RCT-186	0.83542794	0.98143643	1.0221893	0.957763	0.9808025	1.0891447	1.0914168	1.0130168	1.6143878	1.0124345	0.69261156	0.75787566	0.7834595
Cyclin G	0.86955075	0.7757826	1.1054544	0.8323638	1.1874308	1.0757862	1.1428698	2.5818644	2.4444077	2.3687803	0.97064924	0.8825827	1.214957
Calgranulin B5	0.8344095	0.9804892	1.0946667	1.0751868	1.1388598	1.0431057	1.1050717	1.2912143	1.7166878	1.1956623	0.8883114	0.93915298	1.0524352
Phase-1 RCT-205	1.0299168	1.4751181	1.0431721	1.7269716	1.1689204	0.9558348	1.066581	1.3878686	1.4977337	2.5007539	1.0650896	1.0654161	1.01488
Phase-1 RCT-206	1.044003	1.571834	1.0149907	1.4867473	0.9160713	1.0389178	0.87553066	2.1979484	2.3377293	3.5004984	0.8361041	1.0658563	1.0565351
Phase-1 RCT-207	1.1011049	1.1681713	0.97737515	1.146749	1.0010878	0.9459847	0.97390884	1.3821874	2.1811771	1.349382	0.8978102	0.98461395	1.0740385
Phase-1 RCT-208	1.2377659	1.341619	1.3461572	1.4022784	1.2384872	1.2316831	1.2213261	1.4978876	0.6178659	1.4325238	0.81448395	0.9540176	0.9553233
Phase-1 RCT-209	1.280247	1.3158734	1.0214721	1.17813	0.8722395	0.9132794	1.001938	1.041385	0.7707072	0.8013848	1.1738698	0.9410509	1.0472288
Alpha-tubulin	1.340872	1.4832586	1.1533147	1.2973719	0.9048504	1.2871315	1.0734574	1.0135958	1.551269	2.0878865	1.0593774	0.9286824	1.0459563
Ribosomal protein L19A	1.0424714	1.2960083	1.2473719	0.9048504	1.2871315	1.0734574	1.0135958	1.551269	2.0878865	1.0593774	0.9286824	1.0459563	1.0459563
IgE binding protein	0.9863913	1.1814872	1.1648044	1.3134143	1.1153663	1.281351	1.0286824	1.4951581	1.782052	1.608498	0.7388038	0.935647	0.89571205
Phase-1 RCT-39	1.0178562	0.8394011	0.6409223	0.8461364	0.9403764	0.906169	0.9851658	0.84760484	2.0307536	0.80919244	1.159381	1.80843	0.9675216
Cofilin	0.7813662	1.4458086	1.1873062	1.287448	1.8862523	1.4924505	1.7022004	1.3794575	1.7603893	0.95273949	1.3555529	0.9111915	1.0708686
Heme oxygenase	0.7625151	1.171188	0.98976158	1.248113	1.1315988	0.6622441	1.173317	1.2082521	5.166067	2.833571	0.75380504	0.7021579	0.9195835
Phase-1 RCT-241	1.136326	1.3246532	0.9872608	1.5865046	1.037402	0.80362386	0.8768884	3.9799404	3.1277288	3.447332	0.9671615	0.965985	1.131555
Ribosomal protein S9	0.67638224	0.9238843	0.8759999	0.8415285	0.87193155	0.80781805	0.9465278	1.8378503	1.8964399	1.7185172	0.8830429	0.875708	0.9707058
Phase-1 RCT-258	0.94039475	0.83147204	0.60317445	0.5637889	0.80160476	0.71095306	0.59928895	1.634442	1.7829134	1.8216311	1.2292593	1.3923188	1.2346812
Argininosuccinate lyase	0.77088335	0.90915763	0.93465275	0.973053	0.8206683	0.87280746	0.92233276	1.6887604	2.1186127	1.5528243	1.0976607	1.1747284	0.89508615
Phase-1 RCT-180	0.8778212	0.8396811	0.9666611	0.7839228	1.0596531	1.018382	1.0804597	2.9116135	2.6057546	2.4536557	0.83458465	0.82464254	1.0120523
Multidrug resistant protein-1	1.0575385	1.8082198	1.0924271	0.84716084	1.2821811	1.1727189	1.1833907	2.300426	3.70146	0.4321008	1.0720319	1.1186783	1.1695346
Omitrine decarboxylase	1.0447135	1.1074297	0.8965423	1.128062	0.9615768	1.0052431	0.8072347	1.2492476	1.054894	0.9320112	1.0189586	0.9282507	0.97392894
Thymosin beta-10	1.161517	1.233815	1.0833348	1.1809543	0.7108585	0.98301118	0.8023491	2.7809892	1.4874567	0.97315739	0.8362392	0.94058494	0.92678274
Phase-1 RCT-109	0.9273359	1.0908196	0.9513927	0.9322815	0.8256009	0.96890473	0.89533997	1.0687681	0.94238408	1.2733823	0.7358746	0.714778	0.88930736
Phase-1 RCT-76	0.96666247	0.8986165	0.68713105	0.8495726	0.7647592	1.0566658	0.9655663	1.0043116	1.9596573	0.8205029	1.0529273	1.0811801	0.8776723

Table 29

Phase-1 RCT-158	0.62671727	0.8731487	1.01859	1.0525323	1.1951684	1.1208496	1.2293366	1.1213176	1.8074675	1.1364514	0.69700873	0.7849749	0.82631925
Phase-1 RCT-113	0.9699883	1.1686648	1.0283492	1.2145302	1.2190608	1.1017714	1.1604939	1.1518381	2.843685	1.2745527	1.0586747	0.82788446	0.91624373
Endogenous retroviral sequence, 5' and 3'	1.2616004	2.7517867	1.2329273	1.2969302	0.8325556	0.8867677	0.9106684	1.0642069	0.6936452	1.3325577	0.72836083	0.8801769	1.0072074
LTR	0.8272831	1.1568769	0.8151819	0.93507856	0.8961991	0.47962517	0.5812697	1.8195065	0.9495761	1.6375195	0.96469583	1.1465247	0.82351494
Beta-actin	1.3870736	1.094252	1.0667254	1.0461574	1.0904137	0.86783594	0.9705321	1.3006668	1.4564623	1.4988978	1.2157159	1.1964607	1.4127248
Phase-1 RCT-65	1.8137842	1.4926396	0.9075093	0.92834268	0.9627468	0.8223582	1.03509	1.205939	1.0519085	1.1772355	1.0881508	1.1715822	0.9841532
MHC class I antigen RT1.A10 alpha-chain	0.6888019	0.4469287	1.1651467	0.5194868	1.0758749	0.89861375	0.9843155	1.3634481	1.2035679	1.2652263	0.9620034	0.9178671	0.9769055
Bax (alpha)	1.168122	1.1105323	1.0769105	1.1485449	1.0026492	1.0103558	1.1113406	1.1931348	0.8689779	0.87457454	0.92284134	1.0041883	
Carboxyl reductase	0.7929627	0.8725392	0.82666665	0.807259	0.6381227	0.7146542	0.6754232	0.59219027	0.36802584	0.60649164	1.128411	1.1149781	0.9545365
Beta-actin, sequence 2	1.5218132	1.3843486	0.8687579	1.1245987	1.1291981	1.0974166	0.9140449	0.8656834	1.1697723	1.1146944	0.88834476	0.7272664	0.8361269
Interleukin-10	1.3182726	1.0018103	0.92479753	0.8543958	1.2947253	0.85076294	1.0040449	1.0463908	1.1161467	1.0215257	1.1486519	1.0365446	1.1705621
Phase-1 RCT-191	1.0049605	1.0792477	0.87328446	0.8702798	0.8658933	0.81927305	0.8222976	1.0400955	0.9187337	1.174232	0.8871905	0.92833816	0.88580537
Phase-1 RCT-111	0.94585145	0.8478578	0.14060186	0.7683969	0.8927621	1.0469461	0.92558044	0.8087739	0.5869766	0.7946528	1.388776	1.059742	1.2285785
Apoptosis-regulating basic protein	0.70921296	0.56282103	0.34651706	0.57334197	0.39203542	0.8811652	0.50938854	0.4308888	0.3418812	0.4946183	0.904765	1.0412313	1.0038175
Glutathione peroxidase	1.4881381	0.81895887	0.86055446	0.76957566	0.904849	0.8737975	0.86452895	0.69962764	0.80802495	0.7033839	0.7724565	0.85405376	0.8838891
Phase-1 RCT-67	0.8411275	0.8307874	0.9862324	1.0540438	1.0918888	0.9833092	1.1209315	1.0828781	1.0979708	1.200964	1.01195	0.923331916	1.0152242
Tryptophan hydroxylase	1.2384677	1.2382232	1.1380172	0.84585	0.8914683	0.81850696	1.0444444	0.4952278	0.63108337	0.5019557	1.4897592	1.186986	0.952556
Sulfotransferase K2	0.8543385	0.56572497	0.98322344	0.6103121	1.1249338	1.0146748	1.1604339	1.0056545	0.47548077	0.8944739	0.881584	0.8633716	1.5612168
Calgranulin B9	1.01822	0.97471607	1.0170873	0.97808646	0.81633755	0.80388053	0.87943673	0.73835768	0.81983126	0.8921588	1.0142531	0.8819831	0.97228036
Phase-1 RCT-123	1.104524	1.0499054	1.0430107	0.8655757	1.165228	1.0978544	1.1859434	1.0546218	0.82030174	0.8318368	0.7508227	0.9898912	1.0542737
Phase-1 RCT-98	0.9597548	0.857752	0.9895478	0.859147	1.0689058	1.0667807	1.1090204	0.92426395	0.97531635	1.070053	0.8431388	1.0487069	1.0406418
Aquaporin3 (AQP3)	0.96807866	0.9455405	0.88837125	0.8158814	1.1659752	1.0840057	1.1819235	0.9022855	0.78618874	0.8339192	0.78636334	1.0356107	1.0155251
ShanY-CoA deaturase, liver	4.777615	1.8423983	0.78078175	0.3392854	0.6357844	0.4812248	0.6392986	0.06319088	0.015076696	0.25005876	0.5205733	1.248778	1.5067388
Phase-1 RCT-84	1.5539175	0.9179355	0.6928424	0.8270775	0.8455933	0.88068426	0.85578285	0.777028	1.2337906	0.777028	1.2337906	1.0501091	1.2741079
(1) Gene expression data for 24 hour													
timepoint are presented as mean ratio of													
treatment/control for all 24 hour predictive													
genes (Table 6).													
(2) Compound and dose abbreviations as in													
Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for													
compound-dose group at 72 h: yes-neer,													
necrosis observed; yes-both, necrosis with													
inflammation observed; no, no histopathology													
observed													
(5) Predictive gene (as in Table 6 and as													
included in Table 28)													

Table 29

Table 28. Expression Data for 24 Hour Timepoint (1)			
Compound-Dose (2)	THEO 100	THEO 100	THEO 100
Animal Number (3)	2534	2535	2536
Liver Toxicity Inflammation Classification (4)	no	no	no
Gene Name (5)			
Gamma-actin, cytoplasmic	0.76594594	0.97891307	0.72943443
Phase-1 RCT-145	0.91574186	0.9679859	0.9506524
Gadd45	1.003104	0.99949396	0.8582763
Phase-1 RCT-78	0.93888533	0.91888814	0.9759662
Fas antigen	1.1769016	1.1550091	1.1224891
Macrophage inflammatory protein-2 alpha	1.0642768	1.118871	1.178175
Integrin beta1	0.9959753	1.0217527	1.0190204
Phase-1 RCT-207	0.88529277	0.8652618	0.86059175
Aspartate aminotransferase, mitochondrial	0.8601697	0.9208655	0.7422213
Casain-alpha	1.0025154	1.0454535	0.9786558
Malic enzyme	0.862876	0.60340106	1.0282205
Phase-1 RCT-30	0.9051461	0.94171995	0.9770086
Hepatocyte growth factor receptor	1.0285422	1.1302722	1.1046553
MAP kinase kinase	1.0489523	1.076368	1.0251946
Sodium/glucose cotransporter 1	2.5327046	1.0254749	0.940983
Phase-1 RCT-27	1.6221023	0.49481867	1.4637878
Phase-1 RCT-50	0.98249906	1.0060899	0.98381525
Phase-1 RCT-192	0.8997751	1.0454236	1.2283906
Phase-1 RCT-288	0.90874445	0.94008686	1.0838721
Phase-1 RCT-37	1.0806079	1.0345812	0.90127534
Organic cation transporter 3	1.0858935	1.0141077	0.93125427
60S ribosomal protein L6	1.0916188	1.0156378	0.83351535
Zinc finger protein	0.9192289	0.83112624	1.0060853
Calgranulin B2	0.9304145	1.0048809	0.9108799
ID-1	1.27314	1.1378935	1.0746839
Phase-1 RCT-92	0.9068178	0.9460542	0.97942894
Phase-1 RCT-115	0.9394865	1.0291935	1.1252848
Matrin F/G	0.8634632	0.75486124	0.8698873
Mitf, homologue (MLH1)	1.0788416	1.0101653	1.0075201
Phase-1 RCT-79	0.9776925	1.0919596	0.95837843
Sorbitol dehydrogenase	1.1778657	1.3451833	0.96302027
Phase-1 RCT-24	1.0812927	1.0905957	1.1312529
Calgranulin B1	0.94093158	1.2008488	0.6612049
Elongation factor-1 alpha	0.84605944	0.8092454	0.7295212
L-gulon-gamma-lactone oxidase	0.8044473	0.94022644	0.7373384
Phase-1 RCT-33	0.91103886	0.80807716	1.0134815
CJun	0.88072175	0.8821594	1.0948552
Phase-1 RCT-233	0.76071817	0.74326813	1.1005937
Phase-1 RCT-36	1.0471901	0.91243786	1.1267406
Phase-1 RCT-242	0.99748135	1.05202	1.0731747
Phase-1 RCT-181	1.1418462	1.0818194	0.8648255
Phase-1 RCT-185	0.64095366	0.57054613	0.8352439
Phase-1 RCT-179	0.8466702	0.7849215	1.0230837
Phase-1 RCT-144	1.051437	0.95828515	0.8664823
IKB-a	1.0670236	0.9245093	0.833147
Phase-1 RCT-225	0.64517287	1.520862	0.7128507
60S ribosomal protein L6 (alternate clone 1)	1.1084635	1.0005352	0.8164751
Beta-tubulin, class I	1.209421	1.0307627	1.0623822
Multidrug resistant protein-2	1.0233074	0.8894162	0.82439774

Table 29

Phase-1 RCT-49	0.83924624	0.8415658	0.86749357
Calgranulin B3	1.2005879	1.2547728	0.97069787
NADP-dependent isocitrate dehydrogenase, cytosolic	0.9544158	0.8292145	0.8635525
Octamer binding protein 1	1.1262	1.1816218	1.1352085
Sodium/bile acid cotransporter	0.818581	0.57089823	0.8713076
Phase-1 RCT-174	0.8589178	0.84215754	0.9859721
Phase-1 RCT-77	0.8283021	0.7832925	0.88240874
Inositol polyphosphate multikinese (IpMK4)	0.68175365	0.60073286	0.8406536
Phase-1 RCT-256	0.8532656	0.9375385	0.77294534
Equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter	1.1670045	1.1187329	0.8148723
CDK102	0.9802107	0.8828788	0.8742017
Phase-1 RCT-209	0.96257424	0.82922745	1.0547599
NADH-cytochrome b5 reductase	0.90693027	0.74825686	0.6996671
Dynamin-1 (D100)	1.0086985	0.7873054	1.0084864
Serum albumin marker protein-30	1.0749152	1.0400483	1.0165031
Phase-1 RCT-89	0.7177791	0.62443787	0.7236195
Carnitine palmitoyl-CoA transferase	1.1797856	1.0452061	1.0220225
Alpha-2-microglobulin	0.91298383	0.68394274	0.8702764
Apolipoprotein CIII	1.1462439	1.0424675	0.9057154
Cathepsin L, sequence 2	0.8784191	0.7744115	0.8270517
Phase-1 RCT-141	3.31068	4.834559	2.027494
Phase-1 RCT-289	0.78335303	0.76567864	0.8824857
Endothelin-1	1.0724537	1.167452	1.2275028
Phase-1 RCT-282	1.0869487	1.2131404	1.0519704
Phase-1 RCT-140	0.88267615	1.034618	0.9926755
Cyclin D1	0.6929358	0.60229584	0.8103455
Phase-1 RCT-287	0.89935323	0.8789643	0.9114314
Phase-1 RCT-281	0.904338	0.8643923	0.942246
Retinol-binding protein (RBP)	1.091891	1.0661339	0.8521145
ATP-stimulated glucocorticoid-receptor translocation promoter (GK)	1.0460283	1.0800432	0.8743004
Phase-1 RCT-60	0.8353465	0.8978088	1.1144725
Pyruvate kinase, muscle	0.87675965	0.8030135	0.81706353
PAR interacting protein	0.83973604	0.94314253	0.80764755
Nucleoside diphosphate kinase beta isoform	1.1135342	1.1776426	1.054133
Gadd153	1.1672707	1.1495482	0.98455568
Insulin-like growth factor binding protein 1	0.9599903	0.8370088	0.9461533
c-H-ras	1.1778839	1.2190326	0.93542105
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.80210847	0.60114694	1.114861
Phase-1 RCT-52	0.8211117	0.7137491	1.1232841
Alpha 1 - inhibitor III	0.57028994	0.56340463	0.9058415
Sterol carrier protein 2	1.1091444	0.9886087	1.0973641
Organic anion transporter 3	1.0918518	1.8182615	1.1941689
Calgranulin B4	0.89023414	0.9880894	1.111008
Phase-1 RCT-182	0.8071315	0.82314545	0.91016908
Calgranulin B8	0.7607451	0.7471206	0.8318646
Aldehyde dehydrogenase, microsomal	0.9390029	0.894696	0.9189517
Phase-1 RCT-128	0.8498232	0.727314	0.8631817
Phase-1 RCT-102	0.8194567	0.6615052	1.0957891
Preproalbumin, sequence 2	0.8905574	0.74350554	0.934407
Apolipoprotein AII	0.3787842	0.37627846	0.70894083
Phase-1 RCT-10	1.093487	0.71814287	0.96578927
Phase-1 RCT-48	0.84217244	0.7051029	1.0403283
Phase-1 RCT-8	1.0493705	0.75968314	0.91237605

Table 29

Phase-1 RCT-168	1.3341461	1.1300302	1.2070315
Phase-1 RCT-88	0.9663817	1.1775694	1.2058598
Beta-alanine synthase	0.99385965	0.94475836	0.8075121
Phase-1 RCT-260	0.40811788	0.35493824	0.8180564
Carbonic anhydrase III	0.40517632	0.6725268	0.73623204
Phase-1 RCT-281	0.90541965	0.84240645	0.98489807
Carbonic anhydrase III, sequence 2	0.98108545	1.2191821	1.2293865
Phase-1 RCT-271	0.7494949	0.80432856	0.74826527
FMG-CoA synthase, mitochondrial	0.68125427	0.77400607	0.5971918
Phase-1 RCT-189	0.93218404	0.952063	0.8467708
Phase-1 RCT-40	0.7804126	0.850847	0.9638659
Urinary protein 2 precursor	0.8367152	0.5344215	0.7873751
Paraoxonase 1	0.8251723	0.5174809	0.777698
Liver fatty acid binding protein	0.75528467	0.7554367	0.76701903
Presenilin-1	0.620445	0.37279692	0.833534
Phase-1 RCT-38	0.9491294	0.9915039	0.8093461
Phase-1 RCT-270	1.0386169	0.9197203	0.8672839
Transferrin	0.6691372	0.8464093	0.8291809
Hepatic lipase	0.6769535	0.4063115	1.0597035
Cytochrome P450 11A1	0.7008663	0.62562305	1.0276171
Phase-1 RCT-175	0.8885932	0.7448218	0.9632081
Phase-1 RCT-117	0.96458346	0.9277731	0.83359284
Phase-1 RCT-137	0.80914836	0.8688486	0.9184684
Melanoma-associated antigen ME491	1.3887467	1.7286536	0.8945096
Phase-1 RCT-12	1.1085943	1.0541285	1.0822709
Phase-1 RCT-152	1.0012881	0.9123893	0.88293477
14-3-3 zeta	0.90749776	0.8827285	1.0356712
Cytochrome P450 2C23	0.6055877	0.35186218	0.78720355
Voltage-dependent anion channel 2 (Vdac2)	1.0933318	1.173226	0.8825908
Phase-1 RCT-154	1.0685142	1.2774626	0.9448297
Superoxide dismutase Mn	1.209133	1.5191853	0.9344253
c-myc	0.8592542	0.7950935	0.8681653
Phase-1 RCT-186	1.019003	0.90070134	1.1251172
Cyclin G	1.5162739	1.4245207	1.1122184
Calgranulin B5	0.95240817	0.9222741	1.0842701
n53	0.85433954	0.9285175	0.8018966
Phase-1 RCT-205	0.9834053	0.9558254	0.8641006
Phase-1 RCT-68	1.0248825	1.2335961	0.9391443
Caspase 3	0.9965033	1.0739098	1.0246888
Alpha-tubulin	0.92739286	0.9581691	0.8999808
Ribosomal protein L13A	0.990069	1.0085459	0.82963576
IgE binding protein	1.0498761	1.0793182	0.9424166
Phase-1 RCT-39	1.038671	1.0944984	1.120013
Cofilin	1.1288278	0.89851238	0.9337457
Heme oxygenase	1.0146351	0.7345184	0.85630935
Phase-1 RCT-241	1.1394907	1.0942625	1.1416953
Ribosomal protein S9	0.7332107	0.8478302	0.7787006
Phase-1 RCT-258	0.89234736	0.92890584	0.9313084
Argininosuccinate lyase	0.83092207	0.8072727	0.82533072
Phase-1 RCT-180	0.8893652	0.8490431	0.8475963
Multidrug resistant protein-1	0.88026994	0.93078876	0.84668805
Omitidine decarboxylase	1.1164659	1.2337508	1.000984
Thymosin beta-10	0.97078444	1.023903	0.79330474
Phase-1 RCT-72	0.93962735	0.97965984	1.005357
Phase-1 RCT-109	0.9676464	0.8998475	0.8108324
Phase-1 RCT-76	0.931341	0.9125314	0.9289546
Vacuole membrane protein 1	0.69853175	0.70681524	0.8286983

Table 29

Phase-1 RCT-158	1.0177301	1.0898222	1.1699955
Phase-1 RCT-113	0.99154558	1.0241038	0.9269980
Endogenous retroviral sequences, 5' and 3'	0.94410974	1.1292355	0.9172262
LTR			
Beta-actin	0.5805013	0.78548074	0.8145368
Phase-1 RCT-85	1.3983315	1.2834874	1.1699543
MHC class I antigen RT1A1(0), alpha-chain	0.7744404	1.3755841	0.878019
Bax (alpha)	1.0446928	1.1844269	1.093296
Carbonyl reductase	1.1043767	1.1847073	1.123939
Beta-actin, sequences 2	0.80486637	0.90577884	0.7625767
Interleukin-10	1.2232448	1.1103532	1.0529303
Phase-1 RCT-181	0.9201004	1.083967	1.0494838
Phase-1 RCT-111	0.63510007	0.7034315	0.5859794
Apoptosis-regulating basic protein	0.7433428	0.80536383	0.7843915
Glutathione peroxidase	0.46700314	0.39502438	0.82144
Phase-1 RCT-239	0.7805749	0.89149824	0.94754094
Phase-1 RCT-67	0.94980337	0.9048422	0.9740861
Tyrosinase	1.1280022	1.0281028	1.1566588
Tyrosinase K2	0.48671588	0.40342534	1.0189437
Sulfotransferase K2	0.8232285	0.7392794	0.84405327
Calgranulin B9	1.0088018	1.1000786	1.036045
Phase-1 RCT-123	0.37450703	0.8392087	0.92834882
Phase-1 RCT-98	0.8602572	0.9242118	1.0401235
Aquaporin-3 (AQP3)	0.10802843	0.07566228	0.48875603
Steryl-CoA desaturase, liver	0.72655076	0.59028258	1.1188107
Phase-1 RCT-64			
(1) Gene expression data for 24 hour timepoint are presented as mean ratio of treatment/control for all 24 hour predictive genes (Table 5).			
(2) Compound and dose abbreviations as in Table 1.			
(3) Individual animal number			
(4) Liver inflammation classification for compound-dose group at 72 h: yes-neo, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed			
(5) Predictive gene (as in Table 5 and as included in Table 26)			

Table 29

Table 30. Expression Data for 72 Hour Timepoint															
Compound-Dose (2)	Animal Number (3)	Liver Toxicity Inflammation Classification (4)	Gene Name (5)	5-FU 13				5-FU 50				5-FU 50			
				no	1927	no	1928	no	1929	no	1937	no	1938	no	1939
Phase-1 RCT-107	1.0781641	1.1578256	1.239701	1.1342289	0.9466555	1.0133674	0.9410233	0.8204523	1.0063459	1.1641815	1.1149566	1.0891063	1.4503918	1.4503918	1.4503918
Beta1ine homocysteine methyltransferase (BHMT)	0.419078	1.173935	0.8100821	0.90051495	0.47018397	0.6718516	1.1135348	1.0328261	1.3002598	0.6279419	0.6484171	0.7125044	1.149337	1.149337	1.149337
Proliferating cell nuclear antigen gene	1.0201807	0.8158989	1.0410704	1.0238171	0.87750566	0.9646988	1.1177591	0.9603862	1.1330894	1.4332315	1.1575084	1.1337144	0.8678046	0.8678046	0.8678046
Cytocrome P450 2D18	1.1583376	1.1605132	1.0502098	1.0339767	1.1123887	0.9683768	0.9443137	0.7553755	0.84765626	0.57712968	0.57712968	0.71534393	0.9772111	0.9772111	0.9772111
Cytocrome P450 2C11	0.91647138	0.8312135	1.0934067	0.9027289	0.82460124	0.96789335	1.2184658	1.1133205	1.2780035	0.39103856	1.117169	0.7480099	0.9777041	0.9777041	0.9777041
Phase-1 RCT-280	0.8542938	1.1278619	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938	0.8542938
Phase-1 RCT-599	1.0831596	0.7407643	0.7651277	0.8164638	0.88746125	0.86284727	1.0274836	0.52429835	1.0712483	0.148406	0.148406	0.148406	0.148406	0.148406	0.148406
Beta-actin, sequences 2	0.91200346	1.075999	0.8472014	0.9673183	0.8791355	0.8839514	1.2761545	0.76077473	0.83350635	0.697078	0.7247665	0.714839	0.828723	0.828723	0.828723
Phase-1 RCT-292	0.106597	1.0188742	0.8768699	0.91298405	0.9965693	0.8973333	0.89307608	0.724427	0.9853155	1.600571	1.0046117	0.985233	1.0007368	1.0007368	1.0007368
Pyruvate kinase, muscle	0.9282224	0.782378	0.921054	0.923309	0.82032834	0.7854332	1.1181059	1.0366006	1.116298	1.0078781	1.0078781	1.280172	1.0078781	1.0078781	1.0078781
Osteocalcin	0.969951	1.0710035	1.0865526	1.129316	1.2060588	1.1870325	1.2225242	1.056018	1.0182258	0.91250776	1.1674411	0.8973806	1.0335582	1.0335582	1.0335582
Calgranulin B1	1.0717757	1.2180904	1.2642843	1.1857843	1.0922823	1.0381172	1.268951	0.4435457	1.1001171	1.1609129	0.9080038	1.0687786	0.9730041	0.9730041	0.9730041
Apolipoprotein AII	0.8000239	1.0836588	0.8252666	0.958082	0.9929398	0.7764584	1.3203215	0.8051888	1.0551484	0.48715346	0.8976258	0.5233711	1.3869821	1.3869821	1.3869821
Connexin-32	1.285848	1.1239316	1.2209723	1.2875593	1.2855315	1.0718268	0.82905924	0.7234583	0.74497825	0.8542973	0.8708032	0.8101292	1.2612486	1.2612486	1.2612486
Phase-1 RCT-109	0.8685114	0.83571947	0.8819622	0.91276675	0.9109769	0.84941137	1.0944417	0.8537247	0.9175308	0.8342056	0.83633673	0.56051174	0.9605108	0.9605108	0.9605108
Glycine methyltransferase	1.0341022	1.4220668	1.3221622	1.0506169	0.9587392	0.96484555	0.9303782	0.4435457	0.9673399	0.85946653	1.0037373	0.8129824	1.8287483	1.8287483	1.8287483
L-glutamate-gamma-butyrate oxidase	0.7348025	1.404939	1.238826	0.947376	0.8254188	0.91325134	1.1324369	0.8712092	1.086797	0.7130688	0.87211233	0.8813877	0.8100849	0.8100849	0.8100849
Phase-1 RCT-258	0.934183368	1.2094859	1.0525705	0.947376	0.8254188	0.91325134	1.1324369	0.8712092	1.086797	0.7130688	0.87211233	0.8813877	0.8100849	0.8100849	0.8100849
Carbonic anhydrase III	1.2174368	1.2717098	1.184523	0.8512765	0.8206887	0.2759828	1.1465468	0.7812461	0.45341435	0.98455745	1.5303383	0.4008804	0.5851125	0.5851125	0.5851125
Phase-1 RCT-78	1.003851	1.061211	1.0524889	0.91298405	0.9965693	0.8973333	0.89307608	0.724427	0.9853155	1.600571	1.0046117	0.985233	1.0007368	1.0007368	1.0007368
Uridine diphosphate 2 precursor	0.5725072	0.72988504	0.6835504	0.64116985	0.7143095	0.6913182	1.049511	0.82002233	0.988137	0.3448864	0.73115635	0.3108277	0.6337205	0.6337205	0.6337205
Insulin-like growth factor I	0.8293313	0.7038528	0.720224	0.6800474	0.77720884	0.76738036	0.798738	0.8076874	0.86420636	0.52387663	0.53441405	0.7033905	0.7033905	0.7033905	0.7033905
And sulfoxidase	0.72980447	1.0856037	1.038929	0.75124284	0.7470725	0.9666685	1.2390324	1.0426973	1.1534754	0.78342118	0.7975361	0.6483179	0.8068976	0.8068976	0.8068976
Phase-1 RCT-185	0.7316496	0.9300018	0.816688	0.9085804	0.9494052	0.5506588	0.8652228	0.80856805	0.87515148	0.6635495	1.0508947	0.675567	0.7383951	0.7383951	0.7383951
Collin	0.8687162	0.93152267	0.8598864	0.8072378	0.91253283	0.7562591	0.7657474	0.81799173	0.77417195	0.59663814	0.728577	0.5394255	0.85463085	0.85463085	0.85463085
Statforn	1.0413896	1.0483744	1.142105	1.054851	1.1851743	1.1240172	1.0451556	1.0147207	0.9428878	1.250439	1.0094224	1.3019003	0.8624678	0.8624678	0.8624678
60S ribosomal protein L6	0.81672806	0.8483287	0.84863896	0.7680135	0.77204555	0.83973247	1.042378	0.8780036	0.94035137	0.8431855	1.171523	0.83185084	0.8582534	0.8582534	0.8582534
Celipodin heavy chain	0.99456325	0.88285	1.0546522	0.88781374	0.78815	0.88794076	1.460541	1.1426837	0.9306333	1.1163723	0.910305	1.0837501	1.2041775	1.2041775	1.2041775
Phase-1 RCT-178	0.7163266	0.8514535	1.103215	1.2718824	1.162186	1.102708	0.9455115	1.0408948	0.8488945	1.156988	0.9224081	0.90313894	1.268098	1.268098	1.268098
Voltage-dependent anion channel 2 (Vdac2)	0.9187295	1.1378814	1.0468268	1.009407	0.96897813	1.073701	1.0633962	0.8750138	1.0769008	0.89703155	0.90948975	0.8478508	0.87280357	0.87280357	0.87280357
Phase-1 RCT-182	0.8399137	0.9046559	0.839625	0.8468866	0.85089144	0.86483634	1.1617124	0.8347814	0.86445197	0.71028784	0.82805675	1.0700417	0.99400893	0.99400893	0.99400893
Adenine nucleotide translocator 1	0.8235181	0.68973064	0.71701914	0.55813134	0.623817	0.59452895	0.8288881	0.89150104	0.8913767	0.9155044	0.8238917	0.97818344	0.89548256	0.89548256	0.89548256
Thymosin beta-10	0.897547	0.8344549	0.7035356	0.70763883	0.691427	1.5268857	0.98622566	1.0101712	0.79506904	0.90605295	0.6954628	0.8350063	0.8350063	0.8350063	0.8350063
High affinity IgE receptor gamma chain (FcεR1gamma)	0.8997756	0.82943	0.84886265	0.8539848	0.7522562	0.7487342	1.385185	0.99933026	1.0533898	0.8365897	0.9042286	0.9116559	0.94181037	0.94181037	0.94181037
Gamma-actin, cytoplasmic	0.7517159	1.0923398	0.7758412	1.1703815	1.0074474	0.85923076	0.8748886	0.7037224	0.73208304	0.9575326	0.75590634	0.5924163	1.12372	1.12372	1.12372
Uncoupling protein 2	1.0084312	0.89775854	0.9235997	0.9235997	0.750951	0.7013487	1.4845445	1.066118	0.8933831	0.9677513	0.98017764	1.1875461	1.0745637	1.0745637	1.0745637
Phase-1 RCT-34	1.2457832	1.0576417	1.0418319	1.2033292	1.277064	1.4441581	0.8912624	0.9951125	1.1800971	1.3174835	1.0286128	1.1276772	0.85863976	0.85863976	0.85863976
Phase-1 RCT-31	0.8594648	1.1737993	0.9161474	0.8518018	0.9579768	0.8318341	0.64628035	0.7274325	0.73431015	0.5243588	0.666428	0.512163	0.67080865	0.67080865	0.67080865
Cyclin D1	0.85837107	0.5427309	0.8305812	0.9892564	0.8931774	0.85060334	0.79048387	0.88027	0.9462815	1.1397063	1.3300858	0.885514	0.8887842	0.8887842	0.8887842
IgE binding protein	0.8768226	0.7910359	0.97154576	0.9352385	0.7600468	0.89185104	1.3118135	0.924072	1.0926913	1.281787	1.0479485	1.1409715	1.0813518	1.0813518	1.0813518
Zinc finger protein	1.0401613	0.9781506	1.120123	1.0592479	1.087815	0.99831616	0.96295856	1.0674223	0.9785439	1.018098	1.092599	1.0153428	1.1855369	1.1855369	1.1855369
Phase-1 RCT-158	0.87360275	0.94468198	0.8658141	0.86528155	0.74590886	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995	0.95426995
Alpha-tubulin	1.5164852	0.89356633	0.86834166	0.95828764	1.0310849	0.9280919	0.8840585	1.0206333	0.96839744	1.187194	1.3039474	1.304522	1.3282887	1.3282887	1.3282887
Alpha-prothymosin	0.8115841	0.86556145	0.8561143	0.7228928	0.9715313	0.86562526	0.8342166	0.8937961	0.8630845	0.51427084	0.72541744	0.5318328	0.8845507	0.8845507	0.8845507
Caldesin 2	0.9167102	0.8971265	1.054394	0.8315766	0.91227716	0.92713857	0.8459109	0.8730413	0.954222	1.390484	1.0323593	1.0608524	0.98388466	0.98388466	0.98388466
Phase-1 RCT-12	1.2208481	1.1157202	1.1148968	1.208064	1.1607248	1.0571898	0.9497279	0.8788804	0.8230778	1.0543516	0.8187002	0.86487427	1.040774	1.040774	1.040774
Cathagrin B	0.8388804	0.95007338	0.83138674	0.8064224	0.9005088	0.95856095	0.931088	0.9897614	1.0331763	1.0331763	0.700828	0.97617616	0.87502277	0.87502277	0.87502277
Phase-1 RCT-24	1.3623462	1.0563393	1.0210133	1.2887222	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474	1.1807474
Melanoma-associated antigen ME491	1.145443	0.9586542	1.06653	0.9292073	1.1758595	0.9954493	1.0263902	1.1453508	1.039014	1.4041648	1.0117372	1.178277	1.0971026	1.0971026	1.0971026

Table 30

Phase-1 RCT-68	1.0330419	1.0902893	1.1266043	1.1040129	1.1150608	1.0248706	1.0319358	0.9511939	1.2638565	0.8616104	1.0947447	1.0168325
Cyclin G	0.9455607	0.9381698	1.4717833	0.8071235	1.1449602	1.2251924	1.1442724	1.2058114	1.7653842	1.2416863	0.9707713	1.2168325
Hypoxanthine-guanine phosphoribosyltransferase	0.9022907	0.99214077	0.7495764	0.7036116	0.6259660	0.8893281	0.9691924	0.7845659	0.7687167	0.7878954	0.7687167	0.7687167
Tissue inhibitor of metalloproteinases-1	1.0473988	0.9414594	1.0709399	1.0284758	1.0265947	1.3366022	1.2720761	1.2557808	0.7503909	1.0195434	0.7878954	1.1845405
U-1	1.2206046	0.8963707	0.8922854	1.0469813	1.2986895	1.1727062	1.0327045	1.2467414	1.0203574	1.1692214	1.0203574	1.1921038
Ribosomal protein S9	0.9445772	0.8995425	0.8423289	0.73118026	0.84625853	0.8861816	0.7053986	0.8107216	0.70725447	0.90887414	0.5763723	0.8986961
Heme oxygenase	0.9025708	1.135419	0.86155826	0.9341835	0.94558084	1.1712568	1.451879	0.7873155	1.137639	1.0831028	1.0255673	1.0255673
Ribosomal protein S8	0.7313188	0.7608143	0.7209185	0.7627183	0.7604317	0.7080884	1.1288764	0.9248457	1.0853588	0.9201059	0.8601954	0.8079844
Ribosomal protein S17	0.8424332	0.821301	0.8002398	0.79895094	0.8217851	0.7943183	1.1288764	0.9248457	1.0853588	0.9201059	0.8601954	0.8079844
Nucleoside diphosphate kinase beta isoform	0.8627273	1.0236252	0.9025533	0.9212371	0.8606448	0.84571373	0.9240782	0.8192705	0.87060004	0.7437884	0.7724894	1.040557
Phase-1 RCT-121	1.0867867	0.99787668	1.1079133	0.9369595	0.8455574	0.9311594	1.0918413	0.9583515	1.3244884	1.0861709	1.337051	1.1452204
14-3-3 zeta	0.7747525	0.8060512	0.8572884	1.0638145	1.0654646	1.0550893	0.9552526	1.1251112	0.96398385	1.2500001	1.087312	1.0639106
60S ribosomal protein L6 (alternate clone 1)	0.7747525	0.8060512	0.8572884	1.0638145	1.0654646	1.0550893	0.9552526	1.1251112	0.96398385	1.2500001	1.087312	1.0639106
Beta-tubulin, class I	1.2002788	1.1058043	0.9102075	1.231496	1.1170341	0.9742035	0.8908808	0.7853347	0.7157833	0.800837	0.8437894	0.89683425
Organic cation transporter 3	0.8651299	0.739278	0.80938119	0.9530045	0.97193519	0.9321905	0.981805	1.0171731	1.0784874	1.1630278	1.2574313	0.89683425
Beta-actin	0.6016344	0.800592	0.47576918	0.6301505	0.5887543	0.4878106	0.797051	0.6349538	0.71420413	0.7983953	0.7948111	0.5783386
Cathepsin S	0.81198817	0.7353666	0.7522476	0.829482	0.7112028	0.7955199	1.4763538	1.1445685	1.0871803	1.1695855	1.118341	0.8591888
Blivardin reductase	1.0735621	1.1150256	1.1032149	0.9325276	0.9041788	1.0130522	1.1934937	1.170278	1.1633765	1.1425332	0.938571	1.0020449
Phase-1 RCT-154	0.88825884	1.0813825	0.8955578	0.991882	0.84218365	1.0034672	1.0383084	1.108054	0.8948319	1.2025355	0.9004538	1.1758225
Phase-1 RCT-283	0.9102205	0.725246	0.80254855	0.797258	0.5877688	0.8622823	1.3929162	1.2597852	1.1168597	0.9571484	1.0942856	0.91484046
Annexin V	0.9500687	0.7628497	1.0344614	0.9270864	1.0183861	1.1805387	0.85168384	0.98846557	1.10033226	1	0.9228605	1.1788558
Complement factor I (CFI)	0.9787567	0.96029168	0.815413	1.004883	1.1303506	1.115812	1.1284832	1.1463889	1.1023006	0.9908772	1.2673923	0.85181256
Phase-1 RCT-276	0.9213152	0.9395568	0.851082	0.81300804	0.7622231	0.7649821	0.8207066	0.8471742	0.8475599	0.6416887	1.0441296	0.7084907
Tyrosine aminotransferase	0.81433881	0.5608793	0.82833405	0.77863854	0.6058875	1.0494115	0.7916314	1.162412	1.0935771	0.42913947	0.6985578	0.46063655
Glutathione peroxidase	0.9650847	0.8282028	0.6029375	0.8051342	0.85715336	0.82447175	0.7913943	0.78109627	0.8238198	0.43211803	0.8257721	0.48733005
Histidine-rich glycoprotein	0.84404695	1.206166	0.73176616	0.83243837	0.89444315	1.1280004	0.6107879	0.7520966	0.828158	0.49491157	0.776247	0.594188
Carbonic anhydrase III, sequence 2	0.84537365	1.1795208	0.7371625	0.83358127	0.8507417	1.1135902	0.6223033	0.8711256	0.8031564	0.43944678	0.71251035	0.5742787
Phase-1 RCT-92	1.1737218	1.4082267	1.4468391	1.0323766	0.804527	0.6161689	1.0484004	0.8563331	0.7120263	1.1809454	0.8228841	0.7583865
Transitional endoplasmic reticulum ATPase	1.0328668	0.9528297	0.82174546	0.9537489	0.882807	0.8127787	0.7807287	0.87411	0.8685502	0.6166532	0.85478896	0.74073035
Phase-1 RCT-88	0.9460314	1.0559794	0.81099855	0.83969086	0.8748804	1.1076432	0.7923835	0.8291568	0.80752566	0.6039746	1.1571354	1.1540842
Phase-1 RCT-298	0.7185435	0.7014295	0.55316293	0.8440563	0.86889513	0.79306975	0.89036	0.8199503	0.90752566	0.6039746	1.1571354	1.1540842
Phase-1 RCT-161	1.0998224	1.1397295	1.4468391	1.0323766	0.804527	0.6161689	1.0484004	0.8563331	0.7120263	1.1809454	0.8228841	0.7583865
Glutathione S-transferase theta-1	1.0373302	1.0170063	0.8902663	1.0159855	1.048834	0.997652	0.7507346	1.0051868	0.9397239	0.89783124	0.8510303	0.7525185
Phase-1 RCT-182	1.0128077	0.831171	0.75726576	0.82281345	0.98689193	0.78762615	0.7103612	0.7474072	1.2560817	1.4866103	1.141679	1.607058
JNK1 stress activated protein kinase	0.98715176	1.0813556	1.0259864	0.9366288	1.1199747	1.9125434	1.2688286	1.10341	1.2560817	1.4866103	1.141679	1.607058
Phase-1 RCT-81	0.97852765	1.0285712	0.88216066	0.9235128	1.0425531	0.98780324	0.9211594	0.947643	0.9520583	0.923278	1.1157246	0.85286837
Phase-1 RCT-33	1.0513141	1.0208912	0.8507095	0.8685988	1.1613883	1.1654288	1.2307984	0.91359025	1.0256609	0.80022854	0.85564048	0.8742263
Phase-1 RCT-178	1.144369	1.3758993	1.0580138	2.1025362	1.1205869	1.0746242	0.73961574	0.8849911	1.0032569	1.2268886	1.058343	1.0672807
Apolipoprotein CIII	0.9517704	1.011242	0.87115425	0.8812347	0.8227258	0.7497384	0.9541129	0.90955884	0.97450805	0.9246684	1.0221068	0.83160527
Phase-1 RCT-98	0.9450135	0.9875153	0.9567405	0.899497	1.0220274	0.8827683	0.818983	1.0172758	0.8810394	1.396478	1.0920506	1.027432
NADH-cytochrome b5 reductase	0.8822391	1.0752046	0.7111274	0.8968306	0.8903485	0.55162376	0.84697894	0.74203724	0.7483726	0.8284451	0.8718423	0.9885578
Alpha 1 - Inhibitor III	0.8335401	0.69947018	0.8990173	0.7007135	0.81818044	0.5031044	0.5951214	0.6468224	0.64238955	0.58535184	1.1454055	0.5786404
Phase-1 RCT-233	0.94070005	1.008627	1.0205944	0.9415999	1.0881337	0.7951288	0.7670387	0.8371387	0.8709145	0.8905105	0.8559685	0.87857355
Paraoxonase 1	0.71647826	0.632424	0.49695394	0.7062079	0.7205704	0.73153335	0.75392628	0.7265468	0.8428025	0.7416404	1.382435	0.5291144
Presenilin-1	0.68780327	0.6949133	0.70328184	0.7136893	0.8378685	0.49631718	0.60953525	0.6652092	0.6408032	0.59631666	1.1957431	0.57761024
Apolipoprotein C1	0.8748685	1.0780888	0.83983157	0.7527215	0.85918847	0.730231178	0.618983	1.0172758	0.8810394	1.396478	1.0920506	1.027432
Cytochrome P450 2C23	0.8554183	0.85561603	0.91419107	0.8930536	0.7829076	0.87604184	0.73147285	0.818983	0.80840147	0.8849759	0.72055485	0.62332884
Phase-1 RCT-227	0.87978998	1.0533893	1.1532978	0.8942071	1.3262522	0.82221884	1.074454	0.86832304	0.80855634	0.7488204	0.73221654	0.782748
Hepatic lipase	0.91738105	0.68865745	0.49696366	0.5491536	0.66951064	0.589095	0.694317	0.86832304	0.80855634	0.7488204	0.73221654	0.782748
Phase-1 RCT-164	1.075194	1.0329631	1.039846	1.0560999	1.0442871	1.0720721	0.87613895	0.8897487	0.8897487	0.8897487	0.8897487	0.8897487
Midkine resistant protein-2	1.2035265	0.87267303	1.0378077	1.044017	1.0718092	0.2825608	1.121188	1.07752	1.1486143	1.5058955	1.1424215	1.0772586
Insulin-like growth factor I, exon 6	0.67077168	0.7061887	0.9319289	0.7817259	0.96708425	0.8386313	0.73813138	0.87436867	0.81421746	1.0358677	0.911454	0.7736481
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.9133285	0.724462	0.8270077	0.86453865	0.79900179	0.9502888	0.82701355	0.9883823	0.7263874	0.9891685	0.5222511	0.6659467
Dynamin-1 (D100)	1.0033748	0.9972388	1.0340531	1.0128713	0.8980399	1.0375509	0.86330975	0.778178	0.8284993	0.9892058	0.8284993	0.9892058
DNA polymerase beta	0.89140777	0.8548746	0.85492184	0.7532886	0.931242	0.8631288	0.80876466	0.76202893	0.82222354	0.58161237	0.6061924	0.8344272

Table 30

Phase-1 RCT-173	1.2212738	0.9523045	1.0549021	0.8488876	0.8942228	0.9935157	0.9935985	0.7602179	1.4063168	1.0787874	1.2786305	1.1953226
Ubiquitin conjugating enzymes (RAD 6 homologue)	1.0530167	0.96915866	0.86208724	0.9763135	0.9746424	0.900085	1.057086	1.0284458	0.87301946	1.0113631	0.95133346	1.0588142
Ribosomal protein L13A	1	0.84786004	0.8928293	0.86347304	0.8050952	1.3499919	1.0324097	1.0203551	0.8828917	0.8189752	0.62523055	0.6332788
Phase-1 RCT-144	1.02001	0.8740591	0.8930726	1.03942	0.8967444	0.8863427	1.189511	0.857203	1.3824978	1.3191203	1.18785	0.9754512
Cl-100	1.0041892	1.1998361	1.1155997	1.168419	1.1825588	0.9474335	0.9607227	0.8802427	1.1865595	1.130227	1.130227	0.9815323
Vesicular monoamine transporter (VMAT)	1.0949757	1.3948607	1.2468286	1.1459317	2.8754902	1.1369986	1.2016082	1.9649858	1.1776403	1.3870059	1.0424217	1.0700591
Phase-1 RCT-273	1.0143133	1.0524197	1.0183341	1.0844775	1.861821	1.0185154	0.9812825	1.145591	1.7325209	1.8326114	1.404002	1.0102078
Phase-1 RCT-74	1.0368474	1.2081572	1.11468	1.1576287	0.9896152	2.8286211	1.2182211	1.0687944	1.084041	1.9163368	1.4005544	1.0760858
Phase-1 RCT-40	1.0895914	1.0717949	1.2146791	1.4023653	1.1105456	1.1537037	1.0754609	1.222835	1.5861819	1.1769075	1.4005544	1.0760858
Phase-1 RCT-58	1.0389903	1.2543009	1.0281663	1.351317	1.0429682	1.1630512	1.0754609	1.222835	1.5861819	1.1769075	1.4005544	1.0760858
Phase-1 RCT-158	1.0295051	1.0880079	1.1081749	1.1116594	1.0352112	0.84605285	1.0754609	1.222835	1.5861819	1.1769075	1.4005544	1.0760858
Deoxyribonuclease kinase	1.0896454	1.0738254	1.1984454	1.5777983	1.0766571	1.168353	1.2688054	2.661875	2.0884225	2.224185	1.435789	1.0928152
Inositol polyphosphate multikinase (IpMK)	1.0592992	1.17569	1.1138974	1.177593	1.0766571	1.168353	1.2688054	2.661875	2.0884225	2.224185	1.435789	1.0928152
Neuronal cell adhesion molecule (NCAM)	1.189217	1.2764768	1.1730386	1.3620418	0.448101	2.493827	1.104076	1.170255	2.0722747	1.2158834	1.485573	0.9884535
Hepatocyte growth factor receptor	1.1104872	1.1393399	1.3434706	1.0396338	1.3713768	1.2085292	1.2696107	1.3875355	1.4736297	1.2079442	1.2242899	1.2836348
Empty	1.0762386	1.123321	1.2896309	1.383921	1.3149377	2.0835257	1.094038	1.0772259	1.186429	1.670496	1.1455634	1.187321
Dopamine receptor D2	1.200632	1.0649865	0.8830474	1.2408094	1.228739	2.011194	0.8698991	0.91441494	0.8827826	0.9345883	0.98338556	0.8433897
Four repeat ion channel	1.0207652	1.0328974	1.0187851	1.6168012	1.022334	1.0528959	0.983875	1.1270813	1.044353	1.4374206	0.9787213	1.159576
Adrenomedullin	1.0683174	1.3321592	1.2835461	1.4014925	1.2377652	2.2738853	1.093387	1.1460586	1.1382611	1.022803	1.159576	1.1218851
Caveolin-3	1.0146427	0.93517314	1.0248675	1.227294	0.97639457	1.0140382	1.193837	1.193837	1.193837	1.193837	1.193837	1.193837
Phase-1 RCT-129	1.0226387	1.1390083	1.0334035	1.1994448	1.0596619	1.349721	1.0320334	0.9941484	1.0876033	1.6543369	1.0286274	1.2387211
Phase-1 RCT-484	0.95523155	0.9622699	1.2025807	1.0357448	1.2376527	1.1154279	1.0929324	1.1190014	1.0126497	1.6923381	1.1263001	1.1176808
Sarcoplasmic reticulum calcium ATPase	1.0166633	0.8525562	1.831206	0.842403	0.860541	2.1884484	1.0304695	1.0772259	1.186429	1.670496	1.1455634	1.187321
Phase-1 RCT-78	1.0413519	1.2346552	1.0387781	1.0862091	0.9134981	1.6601467	1.060836	1.0522028	1.0476712	1.7029284	1.187321	0.90700394
Phase-1 RCT-151	0.8160808	1.1961901	0.9989426	1.0717597	0.904208	1.1398089	0.7008416	0.4752501	0.8305002	0.9796907	0.6377398	0.6377398
Phase-1 RCT-70	1.146295	1.1239877	1.3873967	1.2950308	1.11915	1.0836872	0.9414988	0.9889727	0.907853	1.215057	0.996895	1.122188
Phase-1 RCT-150	1.0841142	1.3057814	1.0218954	1.283702	1.1442394	1.0652046	0.8572952	0.9263066	0.842775	0.6989768	0.8058126	0.7838441
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.0038772	0.9419907	1.0515016	1.1253406	1.2344017	1.0380243	1.2092997	1.1123397	2.0589714	1.2286365	1.5408771	1.193631
Phase-1 RCT-119	1.0501585	1.2837304	1.0728046	1.056167	0.921529	1.3037683	1.078081	0.757545	0.9078513	0.920329	0.7878912	0.8539421
Periodic acid-Schiff	1.1882173	1.1301624	0.9741924	1.045568	1.3171539	1.1630555	1.314497	0.9185971	0.9720329	0.774788	0.8008955	1.5383103
Superoxide dismutase Mn	0.9954965	0.9680958	1.1688619	1.155984	1.1535581	1.624548	1.056294	1.1138287	1.0177294	1.094005	1.0265142	0.88425996
Phase-1 RCT-115	1.0226931	1.1080754	1.0986381	1.0523218	1.1570748	1.0512862	1.3554022	1.0395488	3.1014247	0.79881	1.0265142	0.88425996
Alpha-1 microglobulin precursor (Anbp)	1.2653257	1.304923	1.3738678	1.387211	1.3908968	1.7012436	1.2838937	1.2575337	1.459105	1.4720652	0.9950063	1.3786271
Phase-1 RCT-18	0.8722734	0.9848654	0.7900896	0.98853	0.8752059	0.8547773	0.9684684	0.8957668	1.0410104	0.7030246	0.8244814	0.8244814
Maspin	0.9834106	0.9874737	1.0974207	1.0845707	1.0472445	1.0396825	0.95479006	1.0841633	0.9597475	1.379544	1.0250269	1.1111264
Decorin	0.882249	1.3734531	1.2568274	1.4120778	1.2143286	2.8940592	1.0081829	1.0395547	1.1471771	1.930567	1.2522622	1.3936874
Retinol X receptor alpha	0.68876868	0.52791613	0.66716766	0.6828984	0.41244343	0.8006348	1.1261736	1.0920701	1.0927123	1.7611489	1.1973282	1.3330745
Cellular nuclear acid binding protein (CBP)	1.0723225	1.045855	1.2777873	1.1285619	1.2285968	1.4240187	1.080774	1.0819731	1.0808538	1.4003441	1.0866321	1.1331484
NADPH cytochrome P450 oxidoreductase	0.8388805	0.720214	0.93378253	0.8886382	0.7597509	0.7506437	1.0378064	0.823463	0.9143372	0.73056837	0.8651391	0.731924
Maltase	1.1740934	1.3400755	1.3534878	1.3004949	1.5131639	1.4659486	0.9848476	0.94054514	0.89286884	0.774788	0.87414163	0.8008955
Caspase 1	1.0528429	1.0692094	1.2876232	1.234544	1.3043729	1.6935484	0.9170724	1.1838408	1.0828694	2.0272763	1.138815	1.1278705
Cystatin C	0.97058356	0.9457593	1.0332929	1.0635244	0.80580744	0.9781890	1.021286	1.1830793	1.0166546	1.7560447	1.1958874	1.4759787
p53COC	0.8833391	0.7046892	0.73707625	0.71600825	0.69397653	0.7305825	1.1218829	1.0016188	1.0859975	0.78162037	0.84815844	0.57618407
Poly(ADP-ribose) polymerase	1.0462022	0.9449238	0.8801267	1.1426284	1.3833522	1.4402821	1.018106	1.077894	1.0128747	1.6387985	1.207202	1.3222769
Tissue plasminogen activator	0.9461408	0.8378151	1.0214618	1.203015	1.009819	0.9489507	1.0500812	1.1880165	1.0103984	1.2958522	1.0225128	1.2818465
Mitochondrial protein-1	1.18106	0.8565732	1.0214618	1.203015	1.009819	0.9489507	1.0500812	1.1880165	1.0103984	1.2958522	1.0225128	1.2818465
Phase-1 RCT-207	1.1119056	0.8838391	0.88121756	1.3502694	1.2849738	1.5758476	1.0283333	1.0119833	1.0782178	0.9042077	0.9189555	1.0006263
Phase-1 RCT-181	1.0573721	1.0492928	1.0120797	1.0582331	0.97259843	1.0138334	0.95880776	1.0610062	0.9549207	1.315314	0.94765025	1.0715985
Gap junction membrane channel protein beta 1 (GJB1)	1.51071	1.3749533	1.6537682	1.5841285	1.5258255	1.1396872	0.7775361	0.70709044	0.68767687	0.90379556	0.82846594	1.0044494
Aquaporin-3 (AQP3)	0.9138117	0.90367573	1.0486352	0.9408348	1.0217019	0.9606978	0.91644394	1.0519748	1.0742525	1.4833888	1.045897	0.9885384
Myelin basic protein	0.93629674	0.8693395	0.93551866	0.9071435	0.81210667	0.9071435	0.81210667	0.9071435	0.81210667	0.9071435	0.81210667	0.9071435
Calgranulin B3	1.0288448	1.012547	0.9163631	0.997773	1.0004324	0.9399092	0.92883873	1.0030487	0.8003825	1.1562724	1.0522703	1.23028

Table 30

Phase I RCT-158	1.0753835	1.0034877	0.94446784	0.8924415	1.1059723	0.92344004	0.8132399	0.817032	0.8678975	0.9112378	0.9658345	0.89540744	0.94774616
Protease activator 28 alpha	0.77768797	0.69415396	0.61917377	0.6790871	0.7414821	0.7598039	0.8960767	0.91882354	0.90309	1.5137752	1.1285288	1.2203652	0.9424763
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=ncr, necrosis observed; yes-brth, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint																
(1)																
Compound-Dose (2)		Liver Toxicity Inflammation Classification (4)														
Animal Number (3)																
Geno Name (5)																
Phase-1 RCT-107	1.16922643	1.17497766	1.4904277	1.3291122	1.0908661	1.0513394	1.147097	0.7404692	1.0208668	0.9745454	1.260763	0.7431807				
Butaline homocysteine methyltransferase (BHMT)	0.76068696	1.2347772	0.7457472	1.0233914	1.1330392	1.2980897	0.6568591	0.22647894	1.1837648	0.8304634	1.6104037	1.1487464				
Proinflammatory cat nuclear antigen gene	0.9421038	0.8697872	0.9263131	0.8597319	0.6881105	0.8734885	0.9286369	0.92201847	0.8818084	0.96076924	0.75720334	0.9464864				
Cytochrome P450 2C11	1.164403	1.003996	0.9552566	1.2370874	1.1805943	1.1805943	0.91294668	1.1777287	1.1777287	1.1777287	1.1777287	1.1777287				
Xylochrome P450 2D8	0.93757134	0.9150951	0.27607150	0.10455841	0.90586287	0.81224848	0.84196899	0.160403025	0.83170563	0.6447462	0.145904154	0.5989157				
Phase-1 RCT-260	0.8118415	1.1768513	0.90122026	1.04669891	1.1904191	1.1904191	1.2837416	0.7830015	0.56764996	1.07282324	1.41173704	1.1465575				
Phase-1 RCT-59	0.88459074	0.97659126	1.0394582	0.9447778	0.86609703	1.04466178	1.0121774	1.0867407	1.03339975	0.6623766	0.73151917	0.7622144				
Beta-actin, sequence 2	0.89847	0.2964172	0.7405182	0.67036176	0.8591983	1.2564864	1.2245383	0.95654255	0.8745524	0.6541884	0.687307	1.0326557	0.9657842			
Phase-1 RCT-292	0.9450987	1.0481787	1.1103489	1.015689	1.0922023	0.91075927	0.857292	1.0711158	1.1884102	1.078424	1.0187814	1.3417908				
Pyruvate kinase, muscle	1.0471798	1.0535958	1.1648186	1.0595326	1.0628451	1.0603091	1.2659142	1.0011149	0.85374594	1.0741525	1.3350737	1.2186653				
Osteocalcin	0.8706321	0.90140875	0.96878905	1.2059599	1.17442934	0.87185781	0.9221174	1.0806009	0.98267228	1.0677068	1.0554288	1.1209835				
Calgranulin B1	0.7063621	0.9523888	1.0911285	1	0.9856777	1.1614078	1.02628749	0.894598	1.0778183	0.8458688	1.4588474	1.1784118	1.0099639			
Apolipoprotein AII	1.1068813	0.9674278	0.9426917	1.1240492	0.64427483	0.9204508	0.6028369	0.8772890	0.8375718	0.46531833	0.35027089	0.51662218	0.4584846			
Comelin-32	1.2568916	1.25624281	0.83063767	1.1644351	1.2694917	1.0075821	1.1180695	1.1207619	0.8941302	1.4950181	0.4077068	1.0516220	1.0410834			
Phase-1 RCT-109	0.863748	0.9441119	1.0959524	1.0810595	1.0452325	1.2575605	1.2634669	1.0544317	1.7045947	1.0164179	0.9684559	0.95904346	0.96860225			
Glycine methyltransferase	1.0585147	1.332735	1.4073533	1.0959522	1.7665182	1.0155988	0.868406	1.188958	0.5086768	1.247524	0.7811568	1.06120874	0.7588943			
L-glutono-gamma-aminocaproic acid oxidase	0.90892345	1.0541453	0.73394394	0.54593855	0.46717063	1.039513	0.87070238	0.8416097	0.40708397	0.8878784	0.9179636	0.37199636				
Phase-1 RCT-256	1.3466525	1.82221514	0.86675024	0.93660187	0.93749758	1.1580014	0.8928484	0.8615549	0.5903484	0.7620725	1.1923636	1.0612072				
Carbonic anhydrase III	0.9898189	0.42115347	0.83715347	0.5486017	0.33702084	1.557728	0.787315836	0.7354449	0.3569597	0.7532403	0.78430426	0.4430978	0.4430978			
Phase-1 RCT-78	0.4111844	1.0402														

Phase-1 RCT-68	1.1426326	1.0403204	1.4125899	1.0801935	1.1241931	1.1586143	1.1170564	1.1503395	1.2578061	1.0669141	1.1530737	1.1218619	1.1502414
Cylin G	0.9571241	0.8702168	1.3911972	1.1639287	1.2651472	0.9871161	1.0976343	1.0934142	1.2960726	0.8133674	0.99108524	0.8465555	1.1034318
Hypoxanthine-Quinone phosphoribosyltransferase	1.014736	0.8731789	0.6428782	0.8377137	0.67738616	0.97429204	1.1722118	0.8648746	1.046508	0.8281386	0.8284684	0.72746676	1.0639428
Tissue inhibitor of metalloproteinases-1	0.83009895	0.8429136	1.132659	1.0763476	1.2139835	0.9098842	0.900474	1.0179472	1.102288	0.89474007	1.0191034	1.0158317	1.0594993
ID-1	1.0478878	1.0962387	0.9442356	0.84641734	0.8604324	0.8457294	0.8265431	1.0294008	1.1317376	1.532731	1.1883878	0.9157875	1.1580161
Ribosomal protein S9	0.9808838	1.012105	0.7803999	0.7627328	0.8113284	0.7142426	0.8256685	0.7124907	1.3615512	0.6378786	0.5195105	0.87413144	1.0451373
Hemo oxygenase	1.2718935	0.8498398	1.9646038	1.5167644	1.3889908	1.1715741	1.1431412	1.1333937	0.9848957	0.8494319	0.83871143	0.8602127	1.0405927
Ribosomal protein S8	0.8433974	0.8371654	0.857261	0.8598827	0.94797087	1.2142032	1.0584548	0.8407015	2.2420235	1.0352346	0.935131204	1.0793735	1.3530215
Ribosomal protein S17	0.8393767	0.77361906	0.82986957	0.8603412	0.8603378	1.2543111	1.1520198	0.964956	1.8554137	1.009784	0.91183734	0.76219045	1.268101
Nucleoside diphosphate kinase beta isoform	1.0243948	1.0360467	0.8371348	0.7629454	1.0072038	1.3771052	1.2346809	0.9509849	3.802832	1.3467683	1.1831572	1.4925424	1.224483
Phase-1 RCT-121	1.0730885	0.94666108	1.0686954	1.1212858	1.0358368	1.0618148	1.0285905	0.9571549	0.78940044	0.8551428	0.77828445	0.9612248	
14-3-3 zeta	1.094878	1.29418	0.91413224	0.7630782	0.7902211	1.0730238	1.069077	0.9017634	1.5778366	1.0031677	0.90163475	1.0102376	1.077806
60S ribosomal protein L6 (alternate clone 1)	0.8621188	0.9689778	0.90579045	0.9269975	1.0031577	1.1094832	1.2622033	0.90571076	1.6778366	1.0031677	0.90163475	1.0102376	1.077806
Ret-ubulin, class I	0.8900429	1.0123988	1.0304754	0.5648316	0.8128031	1.8479883	1.8090381	1.1589731	1.0854965	1.0854965	1.0854965	1.0854965	1.0854965
Orotidine carboxyl transferase 3	0.9590096	0.94901305	0.92493993	0.89784465	0.8036549	1.0725541	1.0854965	1.0854965	1.0854965	1.0854965	1.0854965	1.0854965	1.0854965
Beta-actin	0.88111645	0.9876659	0.788799	0.8780814	1.0552626	1.4414297	1.5962727	0.8243886	0.77930737	0.60612259	0.58119759	0.7047603	1.1531098
Calreticulin S	1.2089037	0.9291789	0.6778548	0.61534314	0.9007197	0.7137883	0.91483	0.97886716	1.2344858	1.0453396	1.0589442	0.89217365	1.372447
Blutverdin reductase	1.1431761	1.0300043	0.7766612	0.843002	1.0306371	0.9678392	1.0909951	0.8788484	1.2344858	1.0453396	1.0589442	0.89217365	1.372447
Phase-1 RCT-164	0.9664544	0.8448525	1.1452597	0.9648689	1.0275119	1.123081	1.0528035	1.0407375	1.5887604	0.9866743	1.0886885	1.0133494	1.0358539
Phase-1 RCT-293	0.8353469	0.900715	0.912499	0.8358565	0.8324133	0.826058	0.9336288	0.9445224	0.847503	1.1856178	1.159112	1.1118781	1.1774235
Annexin V	0.9727357	1.1157306	1.1047	0.9238167	0.95669324	0.8158522	0.9419375	1.0747107	0.7802707	0.858553	0.9520974	0.9545428	0.92699593
Complement factor I (CFI)	0.9720541	1.0178659	0.92211047	1.1784456	1.1671976	0.9630913	0.7604816	1.0839075	1.802398	1.497125	1.3222893	1.3847498	1.5098354
Phase-1 RCT-276	1.0510288	1.043051	0.82019544	0.7781878	0.841282	0.8770374	0.8670252	1.0002688	1.2701343	1.2383235	1.0705594	1.0516531	1.0348186
Tyrosine aminotransferase	0.9036145	0.93150115	0.7705291	1.0080381	1.197765	0.7125768	0.85283598	0.8845398	0.976572	1.0384034	0.9710534	0.7471266	0.8285665
Glutathione peroxidase	0.7549385	0.7382378	0.8421321	1.1784338	1.3975731	0.9413074	0.92398804	0.96567316	0.7792684	1.2782767	0.93728598	0.85577823	1.3222756
Glutathione-rich phosphoprotein	0.9040472	0.72168844	0.68635265	0.7524137	0.8082978	0.8434114	0.54526174	1.1311768	0.8471033	0.7242427	0.48726176	0.7546888	0.57815926
Carbonic anhydrase III, sequence 2	0.56887276	0.72002447	0.70822477	0.70721173	0.77769555	0.80763295	0.5306226	1.1489052	0.4704103	0.8272032	0.8051523	0.6895693	1.1214898
Phase-1 RCT-492	0.7458819	0.7650205	0.74716857	0.7782234	0.8282433	0.94118845	0.6971735	0.85433617	0.8812669	1.002208	0.8562559	0.7598698	0.86527558
Transitional endoplasmic reticulum ATPase	1.3023552	1.3094393	0.9778657	0.7089907	0.748824	0.80763295	0.5306226	1.1489052	0.4704103	0.8272032	0.8051523	0.6895693	1.1214898
Phase-1 RCT-88	0.79247206	0.8538668	0.8705378	0.8492667	0.8635022	0.8632138	0.59276977	0.8571727	0.8571727	0.8571727	0.8571727	0.8571727	0.8571727
Phase-1 RCT-298	0.819523	0.7738382	0.5226536	0.81726085	0.4732829	0.86002014	0.997287	0.997287	0.997287	0.997287	0.997287	0.997287	0.997287
Phase-1 RCT-181	1.0580287	1.0375884	1.2315236	0.87376085	0.4732829	1.5477135	0.73267525	0.90879124	0.88263423	0.872478	0.6895693	1.1214898	0.84221873
Glutathione S-transferase theta-1	0.8895161	0.9610947	0.835466	0.8882247	0.9288978	0.83763204	0.8507209	0.95433617	0.8812669	1.002208	0.8562559	0.7598698	0.86527558
Phase-1 RCT-168	1.1318433	1.1033576	0.9584747	0.81451917	0.8311735	0.732291	0.6971735	0.85433617	0.8812669	1.002208	0.8562559	0.7598698	0.86527558
Phase-1 RCT-182	0.8187343	0.81788176	0.8783579	1.0981374	1.1059881	0.8462283	0.88466058	0.95433617	0.8812669	1.002208	0.8562559	0.7598698	0.86527558
JNK1 stress activated protein kinase	0.9481106	0.9501683	0.5571223	0.8282624	0.8638863	0.9063141	0.9039519	0.8995008	0.909838	1.000174	1.0405328	1.4526507	1.0288101
Phase-1 RCT-83	1.2218244	1.0248188	1.0793008	0.88856934	0.7665803	0.9000104	0.790573	0.9422253	0.8034673	1.075261	0.7598901	0.845016	0.62816995
Apolipoprotein CIII	0.80457646	1.0026929	0.9996811	0.8890252	0.6848356	0.9258324	0.9327635	0.9102804	0.5159372	0.7510509	0.5855128	0.8955339	0.6348266
Phase-1 RCT-48	0.89915963	1.0539982	1.244872	0.9431975	0.8672158	0.8950834	0.990761	1.0371346	0.9468304	1.089508	1.0668103	1.2261211	1.0002141
NADH-cytochrome b5 reductase	0.8421117	0.8758356	0.785027	0.76524	1.0491803	0.84132445	0.984698	0.78821895	0.7885141	1.1700714	0.9284003	1.1011429	1.1124548
Alpha 1 - inhibitor III	0.7605144	0.958328	0.7119219	0.7403245	0.6899517	0.5914887	0.870304	1.0018622	0.2387538	1.0874158	0.8525692	1.2420318	0.7347859
Phase-1 RCT-283	0.765438	0.95746124	1.0220972	0.8918934	0.7688585	0.92851608	1.0340884	0.97978958	1.0383848	0.40971628	0.98845416	0.6563744	0.6818684
Paraoxonase 1	0.8475233	0.87161693	0.76704705	0.8772206	0.8011304	0.82934984	0.77771276	0.8354083	0.39020835	1.0423739	0.9264341	1.9513704	0.70280164
Proteinase-1	0.8176213	1.0280071	0.6609988	0.6652261	0.6838659	0.491668	0.8838772	0.8354083	0.39020835	1.0423739	0.9264341	1.9513704	0.70280164
Apolipoprotein C1	0.7781082	0.82768164	0.68544537	0.73555793	0.7231054	0.65116805	0.8461373	0.80088073	0.8647355	1.3603566	0.9164415	1.7403597	0.8598884
Cytochrome P450 2C23	1.0112249	1.0878084	0.6587017	1.0180564	0.8883001	0.7666213	0.8876433	0.8337705	0.49061083	0.6647355	0.7578244	0.6330579	0.72897047
Phase-1 RCT-227	0.84693825	1.0878084	1.0857631	0.87655157	0.8859588	0.9537432	0.85025247	1.0325029	0.581422	1.3050625	0.73021764	1.0967706	0.96204424
Hepatic lipase	0.87237525	0.80073494	0.6991083	0.63800284	0.49361393	0.80060275	0.8016222	0.51896827	0.7079195	0.89124776	0.8916117	0.8830781	0.7828366
Phase-1 RCT-164	1.0344443	0.97862844	0.7796118	0.81346035	0.7117347	0.81528673	0.6802886	1.1332088	0.8474892	0.8915803	0.7455688	0.7828366	0.7828366
Mitochondrial protein-2	1.1534436	1.0897088	1.2237284	0.84723824	0.917006	0.9848089	1.1766388	1.2508109	1.2948089	1.1766388	1.1766388	1.1766388	1.1766388
Insulin-like growth factor I, exon 6	0.8808231	1.10884	0.7528835	0.742124	0.89023204	0.8416644	1.008905	0.5208193	0.5457941	1.0188065	1.1766388	0.7707487	1.3097772
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.8485147	0.8589159	0.7806436	0.7683087	0.6157163	1.146024	0.87831515	1.0334685	0.5293017	0.8269302	0.58012015	0.9282182	0.8349424
Dynamin-1 (D100)	0.8118657	1.054597	1.1728771	0.9003319	0.8228473	0.9907862	0.8488889	1.0051444	0.82930293	1.1155728	1.074137	0.9758007	0.89844387
DNA polymerase beta	0.9400163	0.89140004	0.9872187	0.5813528	0.74143658	0.9775689	0.97180766	0.9386818	0.9143462	0.8521658	0.8521658	0.8521658	1.0355189

Phase-1 RCT-173	1.3548131	1.3580879	1.0538616	1.0490872	1.2198315	0.84311067	1.2938107	0.7632562	0.7520755	0.7328955	0.5982593
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.0751917	1.0558813	0.6801038	0.7025465	1.0887611	1.0380757	0.885945	0.702668	0.73447	0.7409223	0.80558134
Ribosomal protein L13A	0.8380882	0.8876405	0.9833626	1.0811931	0.9844714	1.054638	1.1947874	0.9932868	0.9373242	0.87535925	1.170484
Phase-1 RCT-144	0.9052626	0.9560470	0.9298191	0.9192519	0.9789157	0.98068047	0.9252108	1.0610635	1.0761682	0.8156246	0.97048074
c-Hras	1.0973188	1.1552731	0.9266419	1.0693889	0.92205614	0.8757185	0.8364619	1.0278592	1.107811	0.629823	1.0373788
Vesicular monoamine transporter (VMAT)	1.0090306	0.9574731	1.8767375	1.3864145	1.425778	1.2946029	1.1417818	1.0297025	1.0819478	0.7835323	0.87150118
Phase-1 RCT-270	1.0271013	0.92220503	1.0039972	1.4034871	1.5345783	1.4047515	1.1588388	0.87603027	0.88712208	0.9705449	0.87787486
Phase-1 RCT-283	1.071141	0.9634177	2.3302011	1.0084877	1.499864	1.6897038	1.405522	0.81970334	0.81970334	0.9254345	0.9885517
Phase-1 RCT-74	1.1277244	0.9740746	1.9534711	1.4558219	1.5050484	1.427142	1.3909801	0.89760475	0.89760475	0.98303618	0.80032325
Phase-1 RCT-80	1.08478	0.9747478	1.9471202	1.4300522	1.4808871	1.511737	1.3623281	0.8971307	0.8971307	0.9240015	0.84239223
Phase-1 RCT-158	1.032828	1.0836263	1.4415401	1.218187	1.2383003	1.0455781	1.0650715	1.1341358	0.97186874	0.87514987	0.8907988
Deoxydiphenyl kinase	1.0429586	0.97879416	1.8944027	1.6840372	1.5109315	1.1003928	1.0355441	0.9444816	0.85558244	1.0681787	0.8465669
Inositol polyphosphate multikinase (IpMK)	1.044127	0.9915931	2.069257	1.3677446	1.5011285	1.1580673	1.1580673	0.9034081	0.8561917	0.9838793	1.0022395
Neuronal cell adhesion molecule (NCAM)	1.0800363	1.020891	2.2825913	1.8684545	1.7293231	1.6831816	1.4841412	1.0069884	0.9251293	0.838731	1.1416728
Hepatic growth factor receptor	1.0413454	1.1783522	1.818093	1.4125973	1.4848931	1.1558852	1.1117414	0.97025806	0.97025806	1.1520454	0.81237507
Emby	1.1281892	0.9929711	3.4511805	1.8409791	2.0545459	2.0878188	1.8427459	0.7693688	0.85748188	0.9704698	1.0414447
Dopamine receptor D2	1.0123607	0.9960004	0.9732398	0.91410977	0.9351956	0.9316282	1.0208547	0.9669306	0.9492781	1.05485	0.97034438
Phase-1 RCT-51	0.9934413	0.97480375	1.86810375	1.4493841	1.2881668	1.2314371	1.168828	0.929862	1.009139	0.9508927	1.1653343
Four repeat ion channel	1.0810088	1.036244	1.4717604	1.220332	1.2584402	1.1683635	1.041131	0.8390252	0.8212468	1.0367212	0.8672857
Adrenomedullin	1.1739018	0.9972951	3.8080697	2.07841	2.28145	3.1400242	1.927282	0.8066113	0.9965128	0.9123238	1.1718334
Caveolin-3	1.087354	1.0495561	1.4176622	1.3505444	1.3305944	1.1812453	1.1947563	0.9468217	0.85075034	1.0586118	0.96422588
Phase-1 RCT-129	1.052771	1.0126002	1.522045	1.3251851	1.380872	1.2504365	1.2397163	1.1033438	0.9468123	0.8915595	1.0619193
Phase-1 RCT-44	0.9316334	0.9465144	1.4265515	1.1623213	1.3257244	1.0659639	1.0712032	1.1605563	1.0294334	1.0538588	1.0874053
Sarcolemmal reticulum calcium ATPase	0.9287205	0.9394644	1.5530328	1.447074	1.2084448	1.1597361	1.0898093	0.81364155	0.8991468	0.93761265	0.75563097
Phase-1 RCT-78	0.9583775	0.96723425	1.47148917	1.3318074	1.2817572	1.5711488	1.3521655	1.2015743	0.89583085	0.8655778	0.9584922
Phase-1 RCT-252	0.89350726	0.9370957	0.8760476	1.0511898	0.8961724	0.9893352	0.9894968	1.1619277	1.2321302	0.91849667	1.117763
Phase-1 RCT-151	1.000659	1.1639760	0.91456425	0.9068816	0.8744964	0.99731034	1.0427309	0.955547	1.155621	1.4820772	1.0898604
Phase-1 RCT-70	0.9533669	0.9549551	1.7051041	1.4461108	1.6805916	1.4653409	1.6805916	0.9653504	1.042415	1.135402	0.7698975
Phase-1 RCT-150	1.3224798	1.2185427	1.0829023	1.1600994	1.1307755	1.0926794	0.9999994	1.0805708	1.1207178	1.3643688	1.2050817
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.017624	0.97445698	1.2050146	1.0654873	1.0460558	0.9517821	1.0208005	0.9763292	0.92546135	0.9608568	0.6897167
Phase-1 RCT-118	0.96781725	0.95939624	1.263944	1.3399668	1.0026245	1.1274927	1.1824768	0.999261	0.9021513	1.1286465	0.93406004
Peroxisomal 3-oxoacyl-CoA thiolase 2	1.386483	1.484731	0.76818803	1.0824328	0.9250947	0.9674468	1.0647289	0.911818	1.4823781	1.0847197	1.0173235
Phase-1 RCT-146	0.99528075	0.77089494	1.5817168	1.177492	1.774253	1.0324131	1.100679	1.1208054	0.8833001	1.0597003	0.9055082
Superoxide dismutase Mn	0.9568668	1.0715953	0.8900878	0.8272859	0.8460092	0.9387574	1.0553946	0.9339743	1.011633	1.0282447	0.9180772
Phase-1 RCT-115	1.1905501	1.1912601	1.4820652	1.321444	1.418974	1.3177303	1.2640803	1.243185	0.97225744	0.89099437	1.0760426
Alpha-1 microglobulin precursor (Amp)	1.0281191	1.0477033	0.8700303	0.7475735	0.71016726	0.7600631	0.82361805	0.9184158	0.9051377	1.1786942	1.5116155
Phase-1 RCT-18	0.9561588	0.9816895	1.3701	1.1534785	1.1386138	1.0951895	1.0789139	1.1584075	1.0528848	1.0986005	1.2590121
Muspin	1.1253189	0.9218874	2.1018015	1.4465683	1.7281572	1.5598475	1.2378262	1.3075286	0.8454801	0.89558333	1.144008
Decorin	1.0820525	0.9507824	2.0384338	1.6374074	1.813244	1.3848598	1.1652918	1.2287749	1.4915003	0.9785425	0.85729168
Retinoid X receptor alpha	1.0123063	0.89416265	1.1258051	1.0881371	1.1250315	0.8754148	0.89458356	0.97433263	1.0436534	1.0286688	1.0768459
Cellular nucleic acid binding protein (CNEP)	0.9197855	0.8888959	0.8282339	0.7748042	0.7517588	0.8608944	0.8388087	0.97468043	0.6252138	0.7248493	0.55604374
NADPH cytochrome P450 oxidoreductase	1.3123587	1.1763468	1.4619287	1.263225	1.5450389	1.23513	1.424303	1.1922088	1.6840928	1.4437758	1.789524
Malic enzyme	1.2387933	1.1023852	1.0772167	0.9107265	1.0778538	1.0643975	1.3321173	1.0244988	0.892538	0.8048199	1.0521585
Caspase 1	1.0918163	0.96577434	1.0914099	0.9150075	0.92648865	0.9818875	1.1003833	1.010829	0.87099286	0.88193815	0.8891925
Cystatin C	0.985853	0.8330876	0.8281228	0.9216378	0.9823004	0.8328809	0.8278895	1.1313948	0.7222897	0.82988255	0.5768945
p53CDC	1.0202894	0.9276312	1.1802806	1.0138327	0.91078115	0.71461767	0.87495315	1.1316859	0.9088254	0.8605592	1.0412344
Pol(ADP-ribose) polymerase	1.3038892	1.3005532	0.9883694	0.92057467	0.89747244	0.9585884	1.0347806	0.917872	1.2708858	0.984122	1.0457635
Tissue plasminogen activator	0.99089175	1.0128971	1.2096735	0.91186174	0.9832287	1.02528	0.981055	0.917692	1.0479386	1.072871	1.069055
Multidrug resistant protein-1	1.1761872	1.0560014	0.8973927	1.0323625	0.8017593	0.9502555	0.95971406	1.1415284	0.98101664	1.0162804	0.9138324
Phase-1 RCT-207	1.0128689	1.058892	1.3571469	1.168194	1.0074805	1.2802753	1.2478931	1.1382997	1.1477638	0.67062575	0.7480131
Phase-1 RCT-181	0.97644756	1.0181449	1.1692859	1.3275175	1.0375993	1.1405653	1.0302811	0.9393568	1.0437332	1.1510322	0.9674006
Gap junction membrane channel protein beta 1 (Gj1b1)	0.86853256	2.0503437	1.74739	1.908474	1.5658097	2.0320068	1.5717654	0.3949261	2.376566	3.0806868	1.5331058
Aquaporin-3 (AQP3)	0.8642112	1.2719256	1.5845599	1.1273608	1.1014991	1.0517709	1.0150708	0.91642256	1.1236848	0.9545712	1.2479812
Myelin basic protein	1.023523	1.0673172	0.80539197	0.9728182	1.3199046	1.1031755	1.1292752	1.2168182	1.2568731	0.75559527	1.3876705
Calgranulin B3	1.0646389	1.1104083	1.1385695	1.037818	0.97621965	1.140393	1.1148786	1.0525291	1.5025436	0.944785	1.0805147

Phase-1 RCT-156	0.8565282	1.0615103	0.82766527	0.83342936	0.86047447	0.9822069	1.0062172	1.0507131	1.2394054	1.096613	0.9209001	1.6847655	0.53964948
Proteasoma activator 28 alpha	0.96969527	0.96598816	0.7495771	0.7210821	0.8639931	0.69896375	0.74735254	0.90401506	1.1432353	1.1993951	1.0369153	0.72708666	1.2722704
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=necr, necrosis observed; yes=hep, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30. Expression Data for 72 Hour Timepoint

[illegible]

Table 30

Phase-1 RCT-68	1.4213893	1.1840075	1.1381367	1.0322258	1.1356555	0.971417039	0.9233909	0.9488089	0.95966156	0.9113449	0.9306456	0.8852866	1.0042715
Cyclin G	2.0134678	1.0362359	0.9533309	1.0878321	1.0337418	1.0839637	0.9561449	0.95696818	0.90928836	0.789082	0.9251508	0.8351872	0.9385198
Hypoxanthine-guanine phosphoribosyltransferase	1.0326027	1.0203966	0.9078695	1.1034418	0.9767149	0.6802084	1.0672441	0.8657088	0.826282	0.7684023	1.2945741	0.9516776	1.099178
Titin	1.0918638	0.890623	1.322962	1.1419069	1.5197718	1.4303877	1.0752818	0.8002807	0.83398548	0.82248678	0.8575008	0.84286695	0.95194757
ID-1	1.700816	0.9101835	0.896957	0.9937385	0.8667182	1.1593407	0.8927584	0.7844077	0.79582655	0.76584865	1.1762669	1.4049158	1.2611916
Ribosomal protein S9	1.3967657	1.3404014	1.1576551	1.4237312	0.8234019	0.72817004	0.873701	0.8928449	1.1997304	0.9336307	1.3543243	1.0728833	0.93423063
Gene oxygenase	1.4730558	0.85153868	0.9976816	1.028542	0.8928542	0.9250947	0.8628163	0.8731826	0.8652838	0.68147026	0.8397468	0.9217119	1.1511713
Ribosomal protein S8	2.7213978	1.345335	1.3501385	1.369075	1.2872893	0.8619207	1.4800803	1.1272455	1.2637554	1.2709147	1.2131803	1.0241173	1.0224441
Ribosomal protein S17	2.3542252	1.3764111	1.3222287	1.2846841	0.8952596	1.2724338	1.1754089	1.2345498	1.2345498	1.2028337	1.1027694	0.95765704	0.98467207
Nucleoside diphosphate kinase beta isoform	3.3242455	1.2266618	1.0921459	1.1741147	0.9143966	1.2724338	1.1754089	1.2345498	1.2345498	1.2028337	1.1027694	0.95765704	0.98467207
Phase-1 RCT-121	0.7360036	0.6282476	0.8904628	0.6088528	0.5520106	1.0747232	0.7157901	0.9160819	0.8621387	0.8304546	1.0725898	0.9928337	1.0968627
14-3-3 zeta	1.1592737	0.8469374	0.8305374	0.9345406	0.8658795	1.1577379	0.8655867	1.0003854	0.8621387	0.8304546	1.0725898	0.9928337	1.0968627
60S ribosomal protein L6 (alternate clone 1)	2.2601793	1.2995632	1.2523554	1.2353184	1.191235	0.8717379	1.3836129	1.0856886	1.0876548	0.8147206	0.8152789	1.3925308	1.2659629
Ubiquitin, class 1	1.7759693	1.4545242	1.310460	1.392385	1.2312861	0.97416278	1.1584315	0.9083484	1.0876548	1.1374086	1.2261413	1.1216782	1.0852697
Organic cation transporter 3	1.546774	1.0102473	1.1715605	1.083453	0.9871021	0.778284	1.3326048	0.9688837	0.9228453	0.78874707	1.6409166	1.5389569	1.0265902
Beta-actin	0.7794975	0.80813595	0.8541617	1.2246727	0.8667574	1.0856657	0.9177255	1.0309085	0.5052073	0.74006128	1.0953712	1.1594763	0.94626336
Cathapsin S	1.021293	1.0877886	1.6541282	1.1219262	1.1647395	1.0746888	0.92384917	1.0375466	1.1280578	1.035276	1.0114298	1.0867899	1.4757975
Bilirubin reductase	1.2523927	1.0420711	1.1149922	1.1027629	1.0933298	1.1575808	1.0073342	0.8876233	0.88887405	0.797082	1.094428	0.8688978	1.0343841
Phase-1 RCT-154	2.0430875	0.7850464	1.0187016	0.878542	0.9251086	1.0520064	1.0029156	0.9945966	0.985987	0.9396216	1.0523173	0.9251832	1.0504011
Phase-1 RCT-293	0.9224728	1.2009556	1.3789914	1.197904	1.7621447	1.1750623	1.4691037	0.8353711	1.0210873	0.9436139	0.7828382	0.7685785	0.86782017
Annexin V	0.94865385	1.0325953	1.1028941	1.0554248	0.8028006	1.0185215	1.0519643	0.921005	1.18881	1.0234855	0.8322215	0.8892486	0.88428813
Complement factor I (CFI)	1.4178868	1.5489458	1.5052885	1.3018781	1.5377402	1.0918838	1.219881	1.0597111	1.1995334	1.2586263	1.2168313	1.2141863	1.1054612
Phase-1 RCT-276	1.0776816	1	1.0936352	0.9602694	1.1090578	0.91078925	1.2333301	1.2222514	1.0973456	1.0620036	0.7619239	0.83113998	0.8891276
Tyrosine aminotransferase	1.096288	1.748841	1.0578845	1.2865059	1.1162676	0.7575195	1.35828	1.3195057	1.1973816	1.2851095	0.6772327	0.8997844	0.74828884
Glutathione peroxidase	0.7117954	1.1835043	1.184555	1.2743407	0.87200713	0.7474393	1.4321299	0.9533328	1.3506052	1.0877469	1.7837425	1.5364807	0.8812103
Histidine-rich glycoprotein	0.25650585	0.83887166	1.5603467	0.89516026	1.3121176	1.0388213	1.7138325	1.6449374	1.567818	1.374128	0.8190827	0.7138079	0.8702881
Carbonic anhydrase III, sequence 2	0.20249762	0.78748008	1.059878	0.8217403	1.2830988	0.8618558	1.6203104	1.515221	1.4848888	1.2547387	0.8463226	0.733132	0.9386158
Phase-1 RCT-92	0.4402847	0.91449016	1.1277757	0.84355786	0.7861784	1.120679	1.0239488	1.4107603	1.3521274	1.2216482	1.2831543	0.9108015	0.9853233
Transitional endoplasmic reticulum ATPase	0.94859195	0.8820166	0.9724638	0.9388042	0.8902204	0.9057383	0.81239465	0.97806084	0.9246513	0.92509454	1.3378503	1.296935	1.174748
Phase-1 RCT-88	0.4600316	0.72760195	1.055184	0.7270177	1.0883514	1.0953187	1.0654085	1.3075085	1.284019	1.146183	0.8494786	0.866928	1.0769626
Phase-1 RCT-268	0.4428437	1.489189	1.2197853	1.1467603	0.77016423	1.0924244	1.4682772	0.7625347	1.438341	1.1765046	1.6284748	1.4825274	1.1728101
Phase-1 RCT-161	0.31105746	0.64872736	0.79216544	0.711182	0.859288	1.1143267	0.90011454	1.0272293	1.001904	0.93752285	1.2733913	1.055048	0.78728155
Glutathione S-transferase theta-1	1.1615282	1.637088	0.9991132	1.1300261	0.9234102	0.78955155	1.0905989	1.1124417	1.0428691	0.9849659	1.2848823	1.388816	1.0915068
Phase-1 RCT-168	1.021565	0.9052505	0.98408797	0.94162995	0.8422393	0.9630384	1.0250148	1.0183924	1.0483915	1.1681743	0.93857645	1.150498	1.2885447
JNK1 stress activated protein kinase	0.84743814	1.0085448	1.2002113	1.0080817	0.94127883	0.88854208	1.0633597	1.2515844	1.498046	0.84576013	1.1518854	1.1740179	1.0219277
Phase-1 RCT-81	0.972189	1.0302714	1.052395	1.018509	0.8803923	1.0710348	0.91902745	1.6244599	1.0718865	0.9597351	0.78969845	0.8314128	1
Phase-1 RCT-178	0.5765408	1.3428836	0.8911328	1.2404907	1.1467057	0.7652832	1.2923003	1.0503477	1.057362	1.0471642	0.81780257	0.9027453	0.9655707
Adipoliprotein CIII	0.57045835	0.48226844	0.6668814	0.47532553	0.80667406	1.0485681	0.83205104	1.1559143	1.0025655	1.0688592	1.2883542	1.2418574	1.5663332
Phase-1 RCT-98	0.39300805	0.8705465	0.581371	1.0271734	0.92257977	0.61801328	1.1737684	1.2714211	1.0161208	1.0476782	0.98120373	0.8762076	0.75623244
NADH-oxochloride b5 reductase	0.86302654	0.8925944	0.7555147	0.76286167	0.9225458	0.86678995	0.84767559	0.9834315	1.0553612	1.0075483	0.7742356	0.7825734	0.90033555
Alpha 1 - inhibitor III	0.7627323	1.133877	0.9866618	1.2000007	0.98856424	0.82583016	1.3494244	1.0112807	1.0922321	1.116832	1.0198509	0.7871683	1.0968668
Phase-1 RCT-233	0.20726845	0.7523111	0.77810283	1.1105013	1.3074633	0.75171292	1.2589687	1.3403768	1.3732904	1.747658	0.96768737	0.77704555	0.71700227
Proteinase 1	0.48931617	0.7039739	0.74889005	0.6578007	0.870637	1.4895876	0.94212556	1.2583588	1.0560149	1.1107209	1.018387	0.71948784	0.8730228
Phase-1 RCT-227	0.30282995	1.9553347	1.7834949	1.8180097	0.8394637	0.85586476	1.0779369	1.0467077	1.2649457	1.4484388	1.3704696	1.3983389	0.986643
Cytochrome P450 2C23	0.55781784	0.8559626	1.1873101	0.839979	1.1854701	0.67171097	1.780457	1.4877851	2.562401	0.7080985	1.040104	0.8870569	0.90359708
Hepatic lipase	0.389174	1.167534	1.043403	1.3853403	0.8115688	0.90707824	0.92723155	1.0947242	1.2196143	1.2613577	1.4526384	0.9391118	0.684924
Phase-1 RCT-184	0.3554684	0.8621653	0.808368	0.6878716	1.3205866	0.7478966	1.3931638	1.6894032	1.0077701	1.2613577	1.4526384	0.9391118	0.684924
Insulin-like growth factor-2	0.567268	1.0563389	1.1874492	1.3934275	0.810957	0.9781462	0.91665496	1.3503981	1.1444089	1.096601	1.2777397	0.89221635	0.99182538
Insulin-like growth factor I, exon 6	1.8041686	1.5343723	1.5236523	1.1975721	0.99749327	1.0454883	0.9885806	0.808524	0.87154776	0.8252476	1.4572119	1.3278049	0.82510456
N-hydroxy-2-acetylaminofluorene sulfoxidase	0.48494872	1.0761082	0.9433922	1.001006	0.94741157	1.0110703	0.9551748	1.3498051	0.8363254	1.2708176	1.3498051	1.1585856	0.9819701
(STIC)	0.41792068	0.8903882	1.2770107	0.9767152	0.9928929	1.0045737	1.0563786	1.2624688	0.85133828	1.4688425	1.0394675	1.1583676	1.0172859
Dynamin-1 (D100)	0.61613804	0.83580816	0.8813726	0.8808237	0.8540158	1.120753	0.8736473	1.2150725	1.0570892	1.0088347	0.72314274	0.8616621	0.8203214
DNA polymerase beta	1.2536064	1.2544768	1.3694757	1.2834631	1.1453756	0.8603166	0.8853442	1.0982883	1.1837805	1.1529286	0.9156054	1.0830169	0.8942734

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Phase-1 RCT-173	0.74381205	0.8552747	1.04108	1.1096245	0.8185905	1.0346228	0.780304	0.8622445	0.9539966	1.2037276	0.890522	0.933365	0.84539616	0.91616386
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.4088408	1.0478432	1.133723	1.1227317	0.8715116	0.8152418	0.8622445	0.9539966	1.2037276	0.890522	0.933365	0.84539616	0.91616386	
Ribosomal protein L13A	1.4403586	1.2991483	1.173313	1.3156827	1.1871866	0.6939888	1.3814674	0.90263164	1.0168959	0.95221555	1.3317788	0.9380477	0.9932083	
Phase-1 RCT-144	1.0970395	0.911614	0.9085678	0.7800953	0.88815405	1.143987	0.91316724	0.9088324	0.898282	0.87605186	0.7841273	0.855005	0.8572915	
CH-Res	1.1835368	1.0877024	1.1160933	1.007726	1.0561057	0.8934443	1.056163	1.0647132	1.0522001	1.0614903	1.2808914	0.1683278	1.0501696	
Vesicular monoamine transporter (VMAT)	0.92466944	1.0120884	1.0496145	0.8993825	1.1283938	1.0313826	1.026417	0.8289575	0.94112178	0.87689903	0.7012865	0.7182001	0.7380178	
Phase-1 RCT-230	0.93018555	0.8031311	0.91949517	0.85667074	1.2416221	1.0336408	1.0336408	1.0021838	1.0033602	0.7940081	0.8582438	0.8667654	0.8667654	
Phase-1 RCT-74	0.9083772	0.762079	1.0144832	0.7530385	1.1820228	1.0396468	1.16549	0.84526145	0.83291814	0.717357	0.7309369	0.8583866	0.8583866	
Phase-1 RCT-80	0.85536965	0.65935404	0.7208777	0.65954137	0.912722	0.9842184	0.87813218	0.7971714	0.83713808	0.9407225	0.8089446	0.7522337	0.76939354	
Phase-1 RCT-158	0.9428203	0.87955623	0.8131585	0.7214198	1.0579793	0.93586478	1.0941286	0.7915234	0.82852706	0.7650992	0.6513488	0.84851577	0.7215241	
Deoxythymine kinase	0.9453022	0.6961604	0.80007534	0.6088568	0.8560993	1.1007293	0.9259937	0.91521438	0.8542287	0.7978389	0.63848524	0.81486	0.774316	
Inositol polyphosphate multikinase (IpMK)	0.8956944	0.82498735	0.9041004	0.9077426	0.9261885	1.0247178	0.9259306	0.82650197	1.016525	1.0489168	0.9216213	0.74915638	0.82619363	
Neuronal cell adhesion molecule (NCAM)	0.8671042	0.6325483	0.7240928	0.6863986	1.1549801	0.94268167	1.0401055	0.840439	0.8914221	0.8837989	0.7440004	0.7917618	0.7482576	
Hepatocyte growth factor receptor	1.047597	0.6513066	0.78544586	0.70199245	1.1421094	0.9944266	1.0485298	0.7025158	0.754193	0.701826	0.647206	0.693538	0.7128556	
Engr-1	0.903664	1.088473	0.915503	1.1411107	1.0893824	1.1562079	1.0145915	0.78698718	0.83396795	0.71987566	1.1221196	0.9874054	0.8859034	
Opamine receptor D2	0.9983948	0.7186109	0.780275	0.58163076	1.0090537	1.0076493	0.83811656	0.7025747	0.7681395	0.647884	0.5903654	0.5489432	0.8859034	
Phase-1 RCT-51	1.0105915	1.3620311	1.2021695	1.2681729	1.0148573	1.0358747	0.8672234	1.1314172	1.1851385	1.2039163	0.95118165	1.105762	1.069238	
Four repeat ion channel	0.95369085	0.7710222	0.7254397	0.720865	1.0078025	1.0163481	1.0603383	0.9432031	1.0111922	0.986058	0.7117284	0.7759855	0.835742	
Adrenomedullin	0.97203326	0.72510934	0.7322732	0.6874378	0.8589208	0.9440333	0.9471656	0.7884189	0.887301	0.8080307	0.86143744	0.8448224	0.8448224	
Caveolin-3	0.7294178	0.54438055	0.64332	0.56156655	1.0210574	1.061255	0.9717027	0.6451597	0.85215074	0.6374863	0.5901866	0.9429038	0.9720746	
Phase-1 RCT-129	0.9595617	0.5895771	0.6803382	0.6387076	0.858731	1.0181607	0.8587063	0.76955105	0.820748	0.9055829	0.7571948	0.7928816	0.95463475	
Phase-1 RCT-44	1.177978	0.930396	0.72615268	0.9407689	0.8727894	1.0700165	0.9450872	0.83414838	0.86422133	0.85786765	0.74846363	0.90307355	0.8478702	
Sarcoplasmic reticulum calcium ATPase	0.8340753	0.74446994	0.79514843	0.7216883	0.8685024	1.1598	0.89897258	0.8745595	0.9665891	0.93286854	0.82455796	0.78254664	0.86138035	
Phase-1 RCT-78	0.9928782	0.9688143	1.0268982	0.837781	1.174048	1.0175198	1.0057163	1.0414807	1.013386	0.8498598	0.82313004	1.0250497	0.8250497	
Phase-1 RCT-252	1.0230724	0.9269892	1.0342219	0.753966	1.124841	0.9644978	1.154573	0.92053026	0.9177273	0.860781	0.8773144	0.91765	0.9121779	
Phase-1 RCT-151	0.8533626	1.2371502	0.92337865	1.2492861	0.9507404	0.8265721	1.0061048	1.1456804	1.2692216	1.248652	1.281827	1.0179829	1.0898442	
Phase-1 RCT-70	1.5939806	1.1718855	1.0316248	1.1207851	1.3810433	0.850374	1.2185192	0.9717727	0.8988414	0.8004845	1.207171	1.3466024	1.0400337	
Phase-1 RCT-150	0.89141705	0.82461598	0.72871684	0.74754985	1.0995286	0.9802774	0.93793276	0.9698268	0.9228759	0.8699477	0.8699477	0.8699477	0.8699477	
25-hydroxyvitamin D3-1 alpha-hydroxylase	0.8521709	1.0968089	1.1251705	1.1334056	1.1627956	0.7257944	0.7257944	1.0555578	0.9018142	0.8977132	1.3713759	1.2423475	1.3349584	
Phase-1 RCT-19	0.73577005	0.7360336	0.7973869	0.70594025	0.8593305	1.76932	0.83318615	0.83067673	0.86713663	0.7108257	0.68333715	1.1229568	1.1229568	
Peroxisomal 3-keetoacyl-CoA thiolase 2	0.7818062	0.9759615	0.84787834	0.90767248	1.0189375	1.0092472	0.9433107	1.1978037	1.313411	1.2899363	0.7430061	0.75688103	0.9264387	
Phase-1 RCT-148	2.1030467	1.488988	1.0033978	1.3996197	1.1735317	0.8761957	1.5490313	1.3701257	1.0802776	1.1780063	1.9528833	1.2977586	1.2977586	
Superoxide dismutase Mn	0.80163064	0.81890756	0.82098456	0.7638132	0.8982046	1.1271601	0.73394017	1.110386	1.104456	0.97855224	1.3923302	1.1504905	0.7423044	
Phase-1 RCT-115	0.8773903	1.3890352	1.2747589	1.4629307	1.103369	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	
Alpha-1 microglobulin precursor (Ambo)	0.9887348	0.7316482	0.7889273	0.79406524	1.263459	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	0.9527578	
Phase-1 RCT-18	0.8410222	1.2573711	1.2025913	1.1508174	1.1914471	0.6380022	1.5434134	1.1323805	1.0716091	1.1059785	1.3424433	1.1163338	1.0670485	
Maspin	1.1370976	0.77052738	0.83752656	0.77078648	0.8623078	0.9825864	0.86370385	0.8668467	0.90513253	0.92147434	0.87904817	0.82332006	0.9481685	
Decorin	0.8893377	0.81314584	1.0005981	0.83575284	1.1025381	1.1272302	1.0181675	0.8314048	0.9902335	0.900731	0.6132571	0.7741339	0.6695521	
Retinol X receptor alpha	0.85130396	0.84800475	1.0226591	0.3164752	1.025155	1.0044987	0.9075509	0.8845729	0.81466025	0.86887836	0.8169273	0.79278773	0.727167	
Cellular nucleic acid binding protein (CUBP)	1.1945384	0.69593868	0.71527195	0.8790144	0.95128	1.821458	0.9008827	0.852688	0.9545064	0.81818394	1.0832388	1.1713302	1.2170556	
NADPH cytochrome P450 oxidoreductase	0.8538088	1.103388	1.2139599	1.3303168	0.931855	1.08955	0.9205093	1.1504768	1.100257	1.1243558	1.1613185	0.92953838	0.9058565	
Malic enzyme	2.049034	1.097907	0.8170248	0.93377805	1.1353322	1.1689893	1.08529	0.92415816	0.87688935	0.7381521	0.89615387	1.2136478	1.3068045	
Caspase 1	0.49688146	1.4232943	0.85324105	1.0771904	0.8846154	1.0428152	0.8593249	1.024461	1.057185	1.081103	0.6832709	0.5692054	0.81440943	
Cystatin C	0.909208	0.865808	0.8548065	0.8409194	0.8957817	1.169732	0.85587454	0.87041855	0.8453964	0.9206848	0.7984515	0.7948143	0.9819032	
P55CDC	0.8303401	1.0805918	1.4650395	1.222467	1.2014495	0.7604463	1.1039046	1.0179189	0.8486784	1.0671415	1.1238804	1.1406592	1.0474608	
Poly(ADP-ribose) polymerase	1.0718423	1.459468	1.0146887	0.8907179	0.84815394	1.189832	0.8275939	0.6878033	0.9709503	0.8089004	0.91422564	1.0827082	0.98105146	
Tissue plasminogen activator	1.2187282	1.028819	0.8772701	1.7063685	0.8329671	1.1241957	0.8571624	0.85788004	0.8406745	0.7885718	1.1377742	1.090105	1.1434296	
Mitochondrial protein-1	0.967858	0.9473355	0.95541835	0.9287072	0.96808476	0.9878285	0.91271719	1.0317382	1.0074824	1.0572953	1.0224247	0.9295122	0.8748591	
Multidrug resistant protein-1	1.7496847	1.8613973	1.5027198	1.4022202	0.99778104	1.1057198	1.0092008	0.85981214	0.85925	0.8147882	1.2675256	1.2250693	1.1687089	
Phase-1 RCT-207	1.291643	0.7774006	0.9309808	0.8347801	0.8598423	1.1037924	0.7383014	0.808013	0.78479235	0.6879979	1.2484557	0.91280767	0.91280767	
Phase-1 RCT-181	0.7370218	0.8730193	0.920416	0.91643885	0.870792	1.0334269	1.0769078	0.84242505	1.0200114	0.91730082	0.9361559	0.95124114	1.0864903	
Gap junction membrane channel protein beta 1 (GJB1)	1.0149734	0.87900166	0.4544308	0.7338156	1.4557312	1.0304386	1.11628	1.020568	0.8151162	1.0013268	1.2539138	1.4014801	1.8647183	
Aquaporin-3 (AQP3)	0.3330002	0.7883524	0.7020149	0.7101676	0.91305834	1.0244387	0.89319724	0.9611345	0.94519748	0.8928922	0.7905171	0.8615832	0.83881656	
Involucrin basic protein	1.1207024	0.85523975	0.8739682	0.9134491	1.0272898	0.90779257	1.0813393	0.88012895	0.8101155	0.8507183	1.1371157	1.3908151	1.3908151	
Calgranulin B3	1.3587458	0.93844277	0.95086724	0.6556114	1.0037688	0.89689267	0.92878064	1.0514547	0.8845839	0.90054274	0.9568178	1.0760739	0.8419831	

Table 30

Phase-1 RCT-158	1.3058443	1.0005314	0.7093833	0.672004	1.0477419	0.842787	1.0537775	1.1551683	0.9825714	1.0862372	1.012525	1.1063913	1.1800071
Protease activator 28 alpha	1.0633702	1.4184981	1.0625012	1.5465185	1.1948743	0.8768788	1.4350384	0.9687626	1.0516527	1.12212	1.2527546	1.3931542	1.198631
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=neer, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint

Table 30. Expression Data for 72 Hour Timepoint												
Compound-Dose (2)	CAD 1		CAD 2		CAD 3		CAD 4		CAR 16		CCL4 250	
	627	628	629	6374	638	639	1057	1058	1059	2047	2048	2049
Animal Number (3)	no	no	no	no	no	no	no	no	no	yes-ncsr	yes-ncsr	yes-ncsr
Liver Toxicity (inflammation Classification (4))	no	no	no	no	no	no	no	no	no	yes-ncsr	yes-ncsr	yes-ncsr
Gene Name (5)	no	no	no	no	no	no	no	no	no	yes-ncsr	yes-ncsr	yes-ncsr
Phase-1 RCT-1:07	0.9413157	0.8175727	1.0465444	0.95489544	0.83684087	0.8397681	0.8367502	1.3881271	1.0504388	0.83838035	0.4057365	0.8211671
Betaine homocysteine methyltransferase (BHMT)	1.0972499	0.51250667	1.1553246	0.94189126	0.6463215	0.22061688	0.22560133	0.64819384	0.64819384	0.64819384	1.0057768	1.0436077
Procollagen type I alpha 1 (P1A1)	0.8632426	0.9362058	0.9362058	0.9362058	0.8378639	0.8378639	0.8378639	1.3174077	1.50227	1.0542336	1.0520881	0.8532947
Cytochrome P450 2011	0.8781995	0.48800954	0.8907357	1.1642223	0.9351607	1.2790084	0.72882551	1.22754	1.0490507	0.7657927	0.63716204	0.8692917
Cytochrome P450 2C11	0.9621371	0.6026967	0.9477837	0.42051163	0.96739936	1.1038461	0.9538049	0.89162296	0.76228764	0.7230448	0.6027177	0.8732856
Phase-1 RCT-260	1.585165	0.7726037	0.9245058	0.834636	0.96756271	0.5994872	0.43969201	0.88055556	0.5210409	0.6957201	1.0583459	0.9500968
Phase-1 RCT-260	0.962521	0.9037005	0.7672774	0.80327696	0.8545571	0.9772289	3.5630986	2.6084854	1.2642438	0.8576132	1.0383184	1.4300768
Beta-actin, beta-actin	1.1085948	2.1498903	2.8420577	1.9654544	1.61743204	1.1033461	0.8120385	0.94083124	0.9508712	1.328087	1.166925	1.0480884
Phase-1 RCT-262	1.0267116	0.94890365	1.0773171	1.1744982	1.1335309	1.1033461	0.8120385	0.94083124	0.9508712	1.328087	1.166925	1.0480884
Purified kinase, muscle	1.0721862	0.9030008	1.1117191	1.318908	1.423928	1.1922361	1.2966167	1.048933	1.091483	0.84675914	0.82824783	0.9001136
Osteocalcin	1.089122	1.0685326	1.172157	1.7863933	1.1931656	1.2394486	1.1410328	1.1045934	1.0791085	2.0058318	1.8928034	1.8101086
Calgranulin B1	1.0334004	1.069343	1.3357502	1.2159463	0.9760968	0.84119801	1.214617	1.056641	1.0791085	2.0058318	1.8928034	1.8101086
Calgranulin A1	0.77221614	1.141278	2.0735283	2.7566767	1.6149586	0.6085442	0.24395791	0.5343935	0.47672057	0.7012688	0.35653834	0.49430623
Calmodulin-32	0.9037707	0.93830323	0.8548665	0.9897216	0.88933825	0.9293802	0.9293802	0.9293802	0.9293802	0.9293802	0.9293802	0.9293802
Phase-1 RCT-109	1.0147148	1.5853278	1.9990431	1.7071104	1.2716018	1.2659220	0.93175024	0.83766705	1.2931671	1.0437133	0.9851074	1.3242222
Glycine methyltransferase	0.7331911	0.7891173	1.6935781	1.6935781	0.6255915	0.6663612	0.3698972	1.3155428	1.214059	0.49816102	0.36204027	0.9231624
L-lysine-gamma-aminobutyrate oxidase	0.94493459	1.081608	1.0446453	0.8295537	0.1011258	0.8407785	0.66836006	0.68095896	0.8376671	0.75140816	0.8502684	0.746143
Phase-1 RCT-256	1.0019885	0.94528884	0.8093521	0.9116887	0.89626863	0.7546007	0.3982924	0.3982924	0.3982924	0.3982924	0.3982924	0.3982924
Carbonic anhydrase III	0.905533	0.973953	1.4320848	1.0535504	1.717652	0.82214398	0.39584782	0.59316596	0.69119945	1.3288255	0.86304459	1.0404233
Phase-1 RCT-178	0.78045344	0.5732025	0.813778	0.2248908	0.49841147	0.8698056	0.30898956	0.85074395	0.9509824	1.48735858	2.28133275	1.6325665
Phase-1 RCT-178	1.0594742	1.2078959	1.0416907	1.1230013	1.1653006	1.0487798	0.28232285	0.47335592	0.9067008	0.9067008	0.9067008	0.9067008
Inulin-like growth factor I	0.76206936	1.2053192	1.0862569	0.9178877	1.3351289	1.0724293	0.57202524	0.7364208	0.73278986	0.7698611	0.8158128	0.6960456
Aryl sulfatase	0.94493459	1.081608	1.0446453	0.8295537	0.1011258	0.8407785	0.66836006	0.68095896	0.8376671	0.75140816	0.8502684	0.746143
Phase-1 RCT-185	1.0115491	0.89231753	0.8437548	1.0486541	0.9605853	0.8933131	0.8451205	0.84285138	0.8980046	1.0894772	1.0292881	0.8390035
Sirtuin	0.884513	0.8024686	1.206372	1.5890474	1.1654542	0.96419567	0.8610957	0.8610957	0.8610957	0.8610957	0.8610957	0.8610957
Sirtuin	1.0282033	1.3426235	1.3117089	1.5594418	1.0598022	0.8977288	1.3125939	1.3125939	1.3125939	1.3125939	1.3125939	1.3125939
Sirtuin	1.086594	1.0345411	1.0614898	1.3612785	1.1311082	0.8977288	1.3125939	1.3125939	1.3125939	1.3125939	1.3125939	1.3125939
Colipasin I leavy chain	0.86236223	0.7092398	1.3465984	1.2869084	0.86726666	0.83729117	1.332724	0.9568621	0.9568621	0.9568621	0.9568621	0.9568621
Colipasin type II	0.9101587	0.9301394	1.146698	1.2397739	1.0653725	0.9718877	1.1505094	0.7614523	1.1404939	0.9691130	1.2330016	0.9120464
Voltage-dependent anion channel 2 (Vdac2)	1.0741417	1.2761326	1.9867217	1.609847	1.6170978	1.1603104	0.2869393	1.095964	1.24673	1.4566534	1.534085	1.1037349
Phase-1 RCT-182	1.224292	0.930671	1.160821	1.3025424	1.2055268	1.2325278	0.9189155	0.8116658	0.9852801	1.3794179	1.4802845	0.9475594
Adenine nucleotide translocator 1	0.87119055	0.61931834	0.6674833	0.6030012	0.6903428	0.6421082	0.735699	0.66647276	0.7973023	0.93396	0.903168	0.8737416
Adenine nucleotide translocator 10	1.0364082	1.1918932	1.2875615	1.3821442	1.0723095	0.7290472	1.095088	0.8684884	1.1047181	1.0413312	0.98854547	0.9630396
High affinity IgE receptor gamma chain	1.10827	1.2941557	1.4825243	1.6697525	1.502082	1.3603049	0.86780196	0.83869	0.91072696	1.1458384	1.251457	1.0065495
Gamma (gamma)	0.81488305	0.87533534	0.7876638	0.8637703	1.2578289	1.1429021	1.0803655	0.51903874	0.8082217	1.2430302	1.0766562	0.8244675
Uncoupling protein 2	1.0356292	0.97172993	1.117478	1.2188777	1.2579546	0.9121676	1.4547607	1.1121687	1.1410665	1.11768	1.0441632	1.008842
Phase-1 RCT-34	0.9068180	0.8592542	0.87704533	1.1030862	0.94165858	0.99176985	0.9537823	1.216318	1.456933	1.2922055	1.371498	1.2102054
Phase-1 RCT-31	0.85283031	0.2415291	0.56451	0.646282	0.6257801	0.8895522	1.477653	0.9591369	1.371177	1.6408532	1.4209054	1.3982831
Oxyin D1	0.6341727	0.701316	0.710397	0.7399335	0.7142174	0.7644181	0.67021173	0.98037978	0.9509335	1.3488333	1.769839	0.9044326
IgE binding protein	1.2568903	1.7770077	1.6814594	2.5282478	1.9154643	1.7337697	0.0296745	1.0519382	0.9734221	1.1097198	1.1591631	1.494808
Zinc finger protein	1.1518028	0.9521174	1.0439928	0.95751977	0.82956505	0.934477	1.42712	1.173207	0.8806634	1.042179	1.127059	0.9707479
Phase-1 RCT-138	1.1518028	0.9521174	1.0439928	0.95751977	0.82956505	0.934477	1.42712	1.173207	0.8806634	1.042179	1.127059	0.9707479
Alpha-tubulin	1.0390459	1.1923251	0.8686735	0.6660682	0.6660682	0.6693219	0.7973386	0.8008812	1.0400246	1.6833117	1.153723	1.3282735
Calpain 2	0.9363384	0.4344814	0.5852368	0.60646914	0.7237673	1.1955554	0.7756894	0.843385	1.770887	1.166218	1.029369	0.9601392
Phase-1 RCT-12	0.9501388	0.6370854	0.7158476	0.8981123	0.7687932	1.0720715	1.3627151	1.1982052	1.071572	1.0701485	1.0341055	0.9601392
Cathepsin B	0.9864173	1.9319571	1.7107547	1.964728	1.9731442	1.7699296	0.8155689	0.89212085	0.83241284	1.0905543	1.0255699	1.1345938
Phase-1 RCT-24	1.1325959	0.6409109	0.9821198	1.2730005	0.8852986	0.94348484	1.1576204	0.9699994	1.0271378	0.9899994	1.4645088	1.4525738
Anti-idiotypic anti-ME491	0.9953169	1.3276935	1.0112805	1.225988	0.8681445	1.2237835	1.0806693	1.1943859	1.0900705	1.4720765	1.2948578	1.2509873

Table 30

Phase-1 RCT-68	1.0341538	1.1438953	1.1476239	1.2639475	1.2146407	1.1124699	1.3149091	1.1428486	1.1228688	1.1710354	1.3016754	1.0428538	0.97915465
Cytin G	1.0599882	1.0296582	1.1624857	1.2803412	1.0893412	1.0854487	2.9599696	2.3807028	1.3003932	1.0237681	1.3033773	1.0099666	0.9099666
Hypoxanthine-guanine phosphoribosyltransferase	1.0529081	0.7480323	1.0307884	1.042244	0.76853436	0.7899407	0.7789663	0.689069	0.7886922	1.0057204	1.0234538	1.0276684	0.94816846
Tissue inhibitor of metalloproteinases-1	1.1551583	1.8392805	1.5332922	2.231076	1.4829217	1.233323	1.369147	1.138424	1.2571045	1.0054323	1.4146869	1.1661635	1.1168444
ID-1	1.0540423	0.7184786	0.8383352	0.9985904	0.8167851	0.9327705	0.86266784	1.2587248	1.230679	0.9324487	1.0281162	0.942087	0.8894863
Ribosomal protein S9	1.1315293	0.9431823	0.9310816	0.9542063	1.0317105	1.055816	0.94896716	0.8111987	1.0082144	1.0928938	1.3019786	1.143338	0.907597
Heme oxygenase	0.9859683	0.4283924	1.0643942	3.7300348	5.5524483	2.7779517	1.0551637	0.9145708	0.9148828	1.2192681	1.2521638	1.2716238	1.0900185
Ribosomal protein S8	1.1842743	1.5900296	1.6450206	1.6552973	1.901067	1.3777891	0.7040142	0.58819083	0.82976676	1.2437532	1.3446913	1.0737239	1.117432
Ribosomal protein S17	1.357558	1.4335613	1.5461757	1.5287377	1.8742467	1.373289	0.7041142	0.58819083	0.82976676	1.2437532	1.3446913	1.0737239	1.117432
Phosphatidylcholine transferase	1.3663622	1.5598345	1.3298112	1.3820508	1.3680358	1.3470265	0.91531795	0.9118843	1.2081472	1.3118549	1.4543111	1.3822663	1.1587939
Nucleoside diphosphate kinase beta isoform	1.0431366	1.0005095	1.1378088	0.77614343	0.7417699	1.017198	1.051838	1.2402866	1.5750666	1.4084526	1.1297388	1.183365	0.85405433
14-3-3 zeta	0.9000934	0.75700685	0.8971722	0.8197048	0.83247614	0.8610177	1.8772742	1.5516932	1.6336448	1.2152431	1.4221848	1.0676337	0.9437727
60S ribosomal protein L8 (alternate done 1)	1.1133198	1.227273	1.5133053	1.6539314	1.7953631	1.1418878	0.79013014	0.7496939	0.8311378	1.1377889	1.2077099	1.0808362	1.0273097
Beta-tubulin class I	1.1128998	0.43381312	0.604121	1.0210123	1.67963148	0.9237004	1.049175	0.9023383	0.8327555	2.03773	1.5125707	1.7723317	1.103874
Organic cation transporter 3	1.068411	1.3185735	1.2200881	0.9488162	0.8938224	0.933927	0.9388556	0.7920386	0.8931727	1.1210359	1.2935792	1.055209	0.9416044
Beta-actin	0.9290386	0.5594599	0.78809415	0.7334646	0.8184533	1.072198	1.051838	1.2402866	1.5750666	1.4084526	1.1297388	1.183365	0.85405433
Cathelin S	0.8353895	1.7656417	1.393412	1.5292982	1.633822	1.4315379	1.0652981	0.93587	0.998913	1.089122	1.142695	1.235511	1.142765
Bilirubin reductase	1.082258	0.8452485	1.0904614	1.1936193	1.1387571	1.0836538	1.4541476	1.2521261	1.2218544	1.1033774	1.316425	1.2565149	0.9220717
Phase-1 RCT-154	1.09756	0.9735964	0.9453876	1.0949309	0.9623003	1.0062271	1.24829311	1.2398216	1.1304674	1.0633132	1.3830305	0.858562	1.0339413
Phase-1 RCT-293	0.84270736	1.1558908	1.3943821	1.5456153	1.3557298	1.4896467	1.0327048	0.94816864	1.0646359	1.0060487	1.1000072	0.99801285	0.9688994
Annexin V	1.162838	1.1425751	1.292336	1.2745287	1.1334476	1.10877	1.3277035	1.0342768	1.2647789	1.2309638	1.1093938	1.0752969	1.0241947
Complement factor I (Cfi)	1.022511	1.0435268	0.987663	1.0481189	0.8280046	0.8988903	0.8974562	0.84245914	0.741641	1.0618423	1.161385	1.0718168	1.2053904
Phase-1 RCT-278	0.6540383	0.91085425	0.9223309	0.84334624	1.0540736	0.772451	0.52730885	0.4248968	0.4604452	1.488484	1.2282906	1.480792	0.9751938
Tyrosine aminotransferase	0.728007	1.3478278	1.057804	1.3037933	1.853373	1.4921211	0.7175445	0.7537197	0.7697544	0.8624543	0.9106519	1.3552814	2.010538
Gluconolactonase	0.88875514	1.0496592	1.2468532	0.9860337	1.0454805	0.9655688	0.5720448	0.8159984	0.7897544	0.8624543	0.9106519	1.3552814	2.010538
Histidine-rich glycoprotein	0.8343396	0.72364056	1.0292805	0.9062954	0.78969187	0.74561876	0.5073048	0.806439	0.71128464	0.83128893	0.75427306	1.0940048	0.940048
Carbonic anhydrase III, sequence 2	1.0114087	0.8499688	1.0292805	0.87503946	0.71038107	0.70762964	0.56393373	0.7485253	0.7377315	0.8975488	0.935271	0.92823737	0.9628002
Phase-1 RCT-42	0.86142364	0.8493851	0.844127	0.76153755	0.795554	0.87895565	0.8978296	0.81320145	0.895198	1.0017833	1.034594	0.9853732	0.9853732
Transitional endoplasmic reticulum ATPase	0.9878973	1.031671	0.8376663	1.0043882	0.88637444	0.7837293	0.94819134	0.8464914	0.82212675	0.78765464	0.82212675	0.78765464	0.816346
Phase-1 RCT-68	0.6334842	0.8282807	1.2616992	1.0065228	1.0458282	0.7365757	0.42315423	0.734193	0.58412825	1.080402	1.201451	1.102776	1.3097128
Phase-1 RCT-296	0.85271653	0.4990388	0.6585033	0.5072101	0.61084765	0.7374718	0.7778599	1.1972619	1.0629773	1.4547825	1.995588	0.926111	1.14133062
Glutathione S-transferase theta-1	1.0747991	0.94947048	0.99596047	0.84077567	0.8974819	0.7902406	1.2562506	1.3810888	1.8697336	1.680232	1.5231421	1.2046309	1.0133662
Phase-1 RCT-168	1.0193028	1.1802148	1.2677609	1.2797205	1.1171018	1.1678708	0.61542815	0.8013723	0.72460786	0.8647172	0.80880934	0.9050113	1.0541831
Phase-1 RCT-182	0.85667684	1.4200408	1.1776277	0.9971715	1.3058347	1.0806235	0.74621457	0.77439	0.83829355	0.8218084	0.8567826	1.042537	0.872928
JNK1 stress activated protein kinase	0.96736443	1.2810931	1.0812051	0.8280049	1.0060792	1.0082688	0.6083468	0.7658409	0.9045181	0.8878185	0.9824673	1.0792885	0.8153347
Phase-1 RCT-81	0.8368345	1.1500531	1.184251	0.87640768	1.1732895	1.0401231	1.5041308	0.9886298	0.9045181	0.8878185	0.9824673	1.0792885	0.8153347
Phase-1 RCT-33	1.0947382	1.0288372	1.3524175	1.8805978	0.9478841	0.78534186	0.7704074	0.86157244	0.85187507	0.85502	0.7185448	0.78640705	1.1578717
Phase-1 RCT-178	0.9695095	0.9514448	1.0288388	0.96285255	0.9913727	0.91684416	0.8608165	0.97353394	0.8401318	0.72040826	0.69043803	0.8372412	0.86339177
Apolipoprotein CIII	0.97434866	0.89285024	0.9491501	0.5910866	0.7155482	0.83002377	0.5102383	0.8206228	0.8603416	0.8285034	0.7365168	0.93966523	0.78418106
Phase-1 RCT-68	1.0104785	0.82463405	0.8286338	0.8280918	0.72524184	0.84275377	1.059587	0.98174274	0.90400237	0.7854089	0.8860593	1.0058944	0.78632574
NADH-cytochrome b5 reductase	1.0098094	1.2108554	0.894916	1.2688086	1.2722616	1.0523027	0.65127707	0.6948123	0.59384704	0.8005888	0.64030147	0.87087864	0.8494381
Alpha 1-inhibitor III	0.628192	0.54312295	0.76746833	0.8916961	0.8344339	0.7869307	0.80031119	1.0452187	0.6778047	0.8651518	0.6133087	1.0745808	1.0650515
Phase-1 RCT-23	0.9440259	1.038595	1.3093301	1.140448	0.8854251	0.85581213	0.39631878	0.74753165	0.6652055	0.8383318	0.9935469	0.9211093	0.9940073
Paraoxonase 1	0.6951164	1.1347339	0.7494653	0.535078	1.5015268	0.9988992	0.49861336	0.6601311	0.58781085	0.8054901	0.9786457	0.950003	1.0594985
Presentin-1	0.6717431	0.5738198	0.78887185	0.74597574	1.0641698	0.82116893	0.61173165	1.0616295	0.6864462	0.9684051	0.7020629	1.132715	1.0400492
Apolipoprotein C1	1.1418918	0.8929913	0.8478754	0.762818	0.8029881	0.7147776	0.27185422	0.48622832	0.41341543	0.8146088	0.8888736	0.77787485	0.93023545
Cytochrome P450 2C23	0.8488911	1.0238372	0.82704437	1.638527	1.5414809	1.084284	0.9894971	0.91441613	0.8707982	0.7163078	0.88268824	0.85384777	0.8741873
Phase-1 RCT-227	0.81166375	0.85503614	1.015839	0.76206335	0.8020855	0.78033175	0.8049675	1.0380468	1.0346362	0.8387797	0.9128243	0.74584084	0.9224913
Hepatic lipase	0.6511015	0.7663036	0.6773834	0.555138	1.590424	0.5080766	0.0068098	0.6419228	0.46137613	0.7000697	0.8309499	0.8692528	0.8909997
Phase-1 RCT-164	1.0054892	0.99407935	0.99523466	0.5770691	0.9046551	0.7692118	1.005794	0.986702	0.9252538	0.76195145	0.8738218	0.9763812	1.1354089
Mitochondrial protein-2	0.87560445	0.72241133	1.0488412	0.9448727	1.0541233	2.8751242	3.2041468	2.8671982	1.3324882	1.3615278	1.4798867	1.1354089	1.1354089
Insulin-like growth factor-1, exon 6	0.75828266	0.9267284	1.2463405	0.94080414	1.0994027	0.7024165	0.70808476	0.96348566	0.7843484	0.83376956	0.811425	0.8988087	0.8988087
N-hydroxy-2-acetylaminofluorene sulfoxidase	1.0534015	0.89914884	0.92977434	0.6120065	1.0335594	0.64625067	0.84115717	0.7448509	0.8269038	0.8634655	0.7622323	0.8553043	0.8553043
ST1C1	0.95889384	0.94640744	0.99481344	1.0700069	0.90452343	0.9281922	0.80294384	1.1082141	0.8801926	0.9662344	1.041187	0.90916765	0.9105309
Dynamin-1 (D100)	1.081534	1.0704784	1.1491803	1.2671165	1.066845	1.1259089	0.9437412	0.7572463	0.8883968	1.2931202	1.4465741	1.1379282	0.9708738
DNA polymerase beta													

Table 30

Phase-1 RCT-173	1.147203	0.9845881	1.0495013	0.820447	0.58587684	0.8673386	0.8971723	1.0118228	0.9821044	1.189408	1.3971306	1.293867	1.0453091
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.0942103	0.93689784	0.94109994	0.8059041	0.8172569	0.8603934	1.1526109	1.0265478	1.1894125	1.1691688	1.3387586	1.172818	1.2830906
Ribosomal protein L13A	1.1852212	1.187738	1.3888159	1.8730823	1.0179886	1.2042919	1.0180464	0.8730946	1.0321352	1.0548769	1.0254123	0.9730299	1.0101775
Phase-1 RCT-144	0.8688567	1.0168708	0.9428757	1.047061	0.9409286	1.2073805	1.0124658	1.0343456	0.9233654	1.031113	1.1516855	1.038018	1.2569329
C-Hra	1.0045537	0.857471	1.1192682	1.3336314	1.115029	1.0855805	1.2788121	1.2611691	1.2791941	0.89410474	1.353519	0.92708156	0.9597443
Vesicular monoamine transporter (VMAT)	1.2742237	1.4957715	0.86220237	0.8802758	1.1954308	1.1141624	1.3620435	1.0279125	1.2359947	1.0656192	1.2770588	1.0693814	1.0185335
Phase-1 RCT-273	1.1316817	0.93051153	0.8406936	1.0501281	1.0571722	1.0547863	1.1485056	1.1872771	0.98130266	0.8838531	0.8197628	0.9827665	1.0081483
Phase-1 RCT-230	1.1908368	1.0748166	0.8923891	0.99510114	1.207761	1.0037527	1.3160451	1.369757	1.192879	0.9772837	0.9014226	0.9142688	1.0521189
Phase-1 RCT-74	1.0126064	1.0364302	0.9815624	1.017411	1.0214222	1.0714256	1.1613014	1.3782638	1.0755548	1.0044312	0.8938572	0.9734878	1.008872
Phase-1 RCT-40	1.2230896	0.9657015	0.9404203	0.82117367	1.0083398	0.89065695	1.4552071	1.6855687	1.0981802	0.881802	1.0008759	0.96904798	1.1218806
Phase-1 RCT-458	0.9609692	1.0597085	0.9248313	1.0416823	0.9743834	1.0491099	0.894985	1.0853733	1.0518732	0.8509535	0.85959574	0.96293716	1.1218806
Deacylating kinase	1.1042856	1.0206331	0.95780313	0.89178534	1.0134584	1.0318582	0.9861741	1.181752	0.9736567	0.9159199	0.97278138	1.1928687	0.86230716
Inositol polyphosphate multikinase (ipmk)	1.0670183	0.9462416	0.9374355	0.89682365	1.0923365	0.8058982	1.1921951	1.0149999	0.780743	0.8514588	0.9184818	0.9482066	1.0364053
Neuronal cell adhesion molecule (NCAM)	0.8282475	0.7706164	0.7650216	0.8777557	0.9177124	0.87988927	1.8362514	2.0154173	1.4098521	1.0164225	0.94571614	1.0728073	1.0853763
Hepatocyte growth factor receptor	0.9287204	0.75556713	0.8456634	1.2697976	1.2678492	1.1609416	1.3021513	1.349452	1.1752199	1.0341059	1	1.0526314	1.3580049
Emery	1.1262058	0.8609444	0.87434614	0.7197183	0.8803649	0.9243221	1.6844639	1.7003748	1.1177793	0.8820628	0.760032	0.80896345	1.3070084
Dopamine receptor D2	0.9882132	0.9056199	0.7807508	0.9240986	0.8828317	1.0086313	1.0179235	0.93163065	1.024183	1.3372025	1.4405721	1.5820578	0.84762933
Four repeat ion channel	1.1374006	0.9608048	0.9513728	0.91822165	1.095498	1.0095782	1.071741	0.87448	0.8968115	1.0455764	1.0638521	1.0270783	1.0831859
Adrenomedullin	1.077166	0.99305403	1.0141723	0.91656816	1.0144492	0.94849	1.039585	1.2242378	0.8583142	0.976935	0.9840235	0.943298	1.0380805
Caveolin-3	1.2509682	1.0168006	0.8897527	0.88873804	0.9989101	1.0173862	2.529198	1.8804885	1.3247814	0.88765437	0.7148274	0.8172887	1.0128188
Phase-1 RCT-129	1.0067738	0.8492927	0.8720596	0.8845624	0.82576493	0.8	1.4050832	1.4047475	0.9971764	0.9734449	0.9262057	1.0068512	1.2355129
Phase-1 RCT-64	1.1568241	0.7972888	1.0370356	1.0511705	1.0653085	1.3398033	1.302399	1.8841054	1.1115928	0.8881058	0.9109857	0.928509	1.0194842
Sarcoplasmic reticulum calcium ATPase	1.0461708	1.4324766	0.9600284	0.9400983	1.124177	1.0654888	1.045943	0.91928005	0.97968814	1.0429484	0.96567116	1.0274407	1.0903408
Phase-1 RCT-79	1.1320223	1.1117017	0.8743839	0.8975193	1.3144821	1.02819	1.207432	0.9668824	0.9784764	0.9846844	0.95657116	1.0274407	1.0903408
Phase-1 RCT-252	1.0314988	0.95167303	0.9176903	0.9085839	0.81950723	0.95326736	0.4035337	0.6722417	0.6228222	1.282507	1.2875841	1.1524371	1.2038004
Phase-1 RCT-151	1.1329687	0.9826158	0.9991287	1.088315	1.1831261	1.3472047	0.929161	0.9998987	0.99139196	0.9336333	0.81676624	0.88338017	1.0873797
Phase-1 RCT-70	0.9807875	0.95583177	1.0080171	1.0023574	0.8830492	0.87769234	1.1898202	1.2417084	1.0342878	1.1315061	0.9231478	1.0512317	0.8639693
Phase-1 RCT-150	1.0096004	0.62878574	0.9171306	0.8074555	0.922893	0.622893	0.237068	1.0298532	0.8935387	0.8609264	0.9108987	1.0168963	1.2465207
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.0350037	1.0161427	1.0371549	1.017035	0.8828855	0.99380545	1.0538281	1.3471886	0.97976744	0.8716756	0.8609281	0.85354625	0.946884
Phase-1 RCT-119	1.2220336	0.9375807	0.9215505	0.8488445	1.0516268	0.83078945	0.50587255	0.71327055	0.8028956	1.290809	1.3034483	1.2319027	1.171147
Peroxisomal 3-oxoacyl-CoA thiolase 2	1.2457116	1.5021113	1.6228625	1.5323247	1.2155102	1.12887	1.0754976	0.89646634	0.9835013	1.2100469	1.1567147	1.4020818	1.2862482
Phase-1 RCT-148	1.0875362	1.0154579	1.0528523	1.2380928	1.0033871	0.90033	1.1277527	1.0746533	1.0488885	0.982811	1.280384	1.1670889	1.0837922
Superoxide dismutase Mn	1.3490118	1.6290375	1.1978994	1.385724	1.2091496	0.8882131	1.2309521	1.0239867	1.3258122	1.103399	1.2920731	0.90405557	1.2828875
Phase-1 RCT-115	1.045287	0.7437316	0.7755194	0.9552599	0.8736523	1.8812768	1.9857035	1.6146903	1.2492148	1.1713016	1.3224268	1.1178282	1.178282
Alpha-1 microglobulin/bikunin precursor (Ambp)	0.8851687	1.2558882	1.1286408	0.8668916	1.2606028	1.0718158	0.76780075	0.86803487	0.9077508	0.912294	0.9538372	1.0833345	1.0245978
Phase-1 RCT-18	1.0318893	1.0375388	0.9755421	0.9932898	0.9965491	1.0045902	0.8444354	1.0336978	0.873177	1.0201975	1.1288812	0.880498	1.2089783
Maipin	1.174048	1.3088124	0.9261201	0.9377938	1.158334	1.0822510	1.4170004	1.3873547	1.0571852	0.8925551	1.0381029	1.0453535	1.0334201
Decorin	1.0403863	2.0997808	1.8146551	2.4164965	1.2343402	1.3175455	1.3427088	1.2846521	1.100443	1.0878946	0.9595872	1.2350111	1.0328142
Retinoid X receptor alpha	0.8841892	0.8327528	0.89089458	0.83238494	0.7861924	0.7283887	1.4673038	1.4846795	1.4698668	1.0007842	0.8885184	0.95445657	0.8647824
Cellular nucleic acid binding protein (CNBP)	0.7828373	1.4447073	1.306061	1.0057234	1.1321528	1.041117	0.805074	0.8782723	0.8285883	1.0882118	1.0787271	1.0214577	0.8570168
NADPH cytochrome P450 oxidoreductase	1.1202277	0.45473418	0.73871624	0.85333014	0.8547892	0.84898087	1.4782832	1.3292413	1.5013148	1.344429	1.0605117	1.136197	1.1248097
Malic enzyme	0.9731214	0.8094274	1.0204176	0.90671265	0.71159085	0.897094	1.3404488	0.9097413	0.88438346	1.215028	1.0956237	0.8111231	0.9298475
Caspase 1	0.9785538	0.98846503	0.9738821	0.8824488	0.76518404	0.8585028	1.3114824	1.2499135	1.178038	1.1030885	1.2541015	0.98118463	1.1776356
Cystatin C	1.1464728	0.8507324	0.7988715	1.0408005	1.1595317	0.9524197	0.8037189	0.8434849	0.854943	1.1297824	1.1546545	1.2230195	1.086228
p53CDC	0.8647809	1.1362681	0.84162005	1.2032914	0.87371475	0.8082173	1.0509099	1.2814289	1.103399	1.2920731	0.90405557	1.2828875	0.988911
Poly(ADP-ribose) polymerase	0.99622893	1.0184307	0.8887898	1.0083522	0.97264728	1.0538886	0.8738014	1.033394	1.0727865	1.037965	1.1341121	0.98731416	1.051136
Tissue plasminogen activator	1.0170196	0.9577281	0.8877754	1.0392473	0.9957702	1	0.8978803	0.9672555	0.9667089	1.0355717	1.0576382	1.0456386	1.2717144
Multidrug resistant protein-1	0.8681108	0.6721649	0.7169925	0.8237516	0.737786	1.4737548	3.3900235	2.570871	3.0459984	1.3651082	1.2587679	1.469048	1.0857657
Phase-1 RCT-207	1.0488476	0.8707481	0.9898984	0.87179005	0.7377786	1.005588	2.828484	0.778414	1.711263	1.0860054	1.2031789	1.0810528	1.0023454
Phase-1 RCT-181	0.9724378	1.1252591	1.20644	1.2885659	1.1745115	1.0489506	0.7828528	0.8760701	0.7983195	0.8616228	0.8331876	1.025852	1.1270132
Gap junction membrane channel protein beta 1 (Gjb1)	0.8778957	0.83434623	1.0858788	1.0274904	0.804739	0.6811612	1.0974425	1.6345972	1.325745	1.0424844	0.8970381	1.0180028	0.9509885
Aquaporin-3 (AQP3)	0.9116323	0.96410567	1.0058259	0.9723379	0.9804214	0.94323387	0.93514586	0.97442764	0.92738984	0.8421468	0.877265	0.8128553	0.93958814
Myelin basic protein	0.7488901	0.8748958	0.7686923	0.8790223	0.7188473	0.9873057	1.3314215	1.1451164	1.2045507	0.9336182	0.838214	0.8439214	1.0197842
Calgranulin B3	1.1454931	1.0398321	1.1467638	1.0459005	0.98378843	1.3688836	1.0781338	0.8982956	0.9789548	1.03853	1.034786	1.0038812	1.0388355

Table 30

Phase-1 RCT-156	0.86042964	0.98545974	1.0472499	0.9074011	0.98696237	1.0804905	1.1207283	0.8971817	1.1516392	0.9995675	0.86276637	1.0037644	0.9207258
Protease activator 28 alpha	1.147022	1.1232285	0.99599034	1.0052983	1.2761179	1.2189189	0.9709987	0.81004417	1.0027183	0.9591767	1.0921249	1.0830462	1.2377565
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=necr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint

Compound-Dose (2)	CHL3 250	CHL3 500	CHL3 1000	CHL3 2000	CHL3 4000	CHL3 8000	CHL3 16000	CHL3 32000	CHL3 64000	CHL3 128000	CHL3 256000	CHL3 512000	CHL3 1024000	CHL3 2048000	CHL3 4096000	CHL3 8192000	CHL3 16384000	CHL3 32768000	CHL3 65536000	CHL3 131072000	CHL3 262144000	CHL3 524288000	CHL3 1048576000	CHL3 2097152000	CHL3 4194304000	CHL3 8388608000	CHL3 16777216000	CHL3 33554432000	CHL3 67108864000	CHL3 134217728000	CHL3 268435456000	CHL3 536870912000	CHL3 1073741824000	CHL3 2147483648000	CHL3 4294967296000	CHL3 8589934592000	CHL3 17179869184000	CHL3 34359738368000	CHL3 68719476736000	CHL3 137438953472000	CHL3 274877906944000	CHL3 549755813888000	CHL3 1099511627776000	CHL3 2199023255552000	CHL3 4398046511104000	CHL3 8796093022208000	CHL3 17592186444416000	CHL3 35184372888832000	CHL3 70368745777664000	CHL3 140737491555328000	CHL3 281474983110656000	CHL3 562949966221312000	CHL3 1125899932422624000	CHL3 2251799864845248000	CHL3 4503599729690496000	CHL3 9007199459380992000	CHL3 18014398917761984000	CHL3 36028797835523968000	CHL3 72057595671047936000	CHL3 14411519142187984000	CHL3 28823038284375968000	CHL3 57646076568751936000	CHL3 11529215313747184000	CHL3 23058430627494368000	CHL3 46116861254988736000	CHL3 92233722509977472000	CHL3 18446744501997472000	CHL3 36893489003994944000	CHL3 73786978007989888000	CHL3 147573956055979776000	CHL3 295147912111959552000	CHL3 590295824223919104000	CHL3 118059164844783808000	CHL3 236118329689567616000	CHL3 472236659379135232000	CHL3 944473318758272000	CHL3 1888946375176544000	CHL3 3777892750353088000	CHL3 7555785500706176000	CHL3 15111571001373312000	CHL3 30223142002746624000	CHL3 60446284005493248000	CHL3 120892568010998656000	CHL3 241785136021997312000	CHL3 483570272043994624000	CHL3 967140544087989248000	CHL3 193428108817597496000	CHL3 386856217635194992000	CHL3 773712435270389984000	CHL3 1547424704543789952000	CHL3 3094849409087579904000	CHL3 6189698818175159808000	CHL3 12379397636351319616000	CHL3 24758795272702639232000	CHL3 49517590545405278464000	CHL3 99035181090810556928000	CHL3 198070362181621139456000	CHL3 396140724363242278912000	CHL3 792281448726484557824000	CHL3 1584562894528177115448000	CHL3 3169125789056354270896000	CHL3 633825157811270854179392000	CHL3 1267650315622541738784000	CHL3 2535300625245083477576000	CHL3 5070601250490166955152000	CHL3 1014120250988033391104000	CHL3 2028240501976066782208000	CHL3 4056481003952132744116000	CHL3 81129620079042654882304000	CHL3 16225924015808530976896000	CHL3 3245184803161706195779392000	CHL3 6490369606323412313514784000	CHL3 1298073921262462702755376000	CHL3 2596147842524925405504752000	CHL3 5192295685049450911011104000	CHL3 10384591370989802222222222000	CHL3 20769182741979604444444444000	CHL3 41538365483959608888888888000	CHL3 8307673096791920877777777777000	CHL3 16615346193839537755555555554000	CHL3 3323069238767841551111111111000	CHL3 6646138477535683102222222222000	CHL3 1329227695507136244444444444000	CHL3 265845539101472888888888888000	CHL3 5316910782029457777777777777000	CHL3 10633821564049155555555555554000	CHL3 2126764312809831111111111111000	CHL3 4253528625619662222222222222000	CHL3 8507057251239324444444444444000	CHL3 1701411450247848888888888888000	CHL3 3402822900487697777777777777000	CHL3 6805645800975395555555555554000	CHL3 1361129160155511911111111111000	CHL3 2722258320311022222222222222000	CHL3 5444516640622044444444444444000	CHL3 1088903328124088888888888888000	CHL3 2177806656248177777777777777000	CHL3 4355613312495555555555555554000	CHL3 8711226624991111111111111111000	CHL3 1742253248182222222222222222000	CHL3 3484506496364444444444444444000	CHL3 6969012992728888888888888888000	CHL3 1393802585449777777777777777000	CHL3 2787605170899555555555555554000	CHL3 5575210341799111111111111111000	CHL3 1115042069599777777777777777000	CHL3 2230084139155555555555555554000	CHL3 4460168270311111111111111111000	CHL3 8920336540622222222222222222000	CHL3 1784067308122222222222222222000	CHL3 3568134616244444444444444444000	CHL3 7136269232488888888888888888000	CHL3 1427253846977777777777777777000	CHL3 2854507693955555555555555554000	CHL3 5709015387911111111111111111000	CHL3 1141803175822222222222222222000	CHL3 2283606351644444444444444444000	CHL3 4567212703288888888888888888000	CHL3 9134425406577777777777777777000	CHL3 1826885013155555555555555554000	CHL3 3653770026311111111111111111000	CHL3 7307540052622222222222222222000	CHL3 1461508010444444444444444444000	CHL3 2923016020888888888888888888000	CHL3 5846032041777777777777777777000	CHL3 1169206408355555555555555554000	CHL3 2338412816711111111111111111000	CHL3 4676825633422222222222222222000	CHL3 9353651266844444444444444444000	CHL3 1870730253688888888888888888000	CHL3 3741460507377777777777777777000	CHL3 7482921014755555555555555554000	CHL3 1496582028511111111111111111000	CHL3 2993164057022222222222222222000	CHL3 5986328114444444444444444444000	CHL3 1197265622888888888888888888000	CHL3 2394531245777777777777777777000	CHL3 4789062491555555555555555554000	CHL3 9578124883111111111111111111000	CHL3 1915624966222222222222222222000	CHL3 3831249932444444444444444444000	CHL3 7662499864888888888888888888000	CHL3 1532499932777777777777777777000	CHL3 3064999865555555555555555554000	CHL3 6129999731111111111111111111000	CHL3 1225999862222222222222222222000	CHL3 2451999724444444444444444444000	CHL3 4903999448888888888888888888000	CHL3 9807998897777777777777777777000	CHL3 1961599795555555555555555554000	CHL3 3923199591111111111111111111000	CHL3 7846399182222222222222222222000	CHL3 1569279364444444444444444444000	CHL3 3138558728888888888888888888000	CHL3 6277117457777777777777777777000	CHL3 1255423515555555555555555554000	CHL3 2510847031111111111111111111000	CHL3 5021694062222222222222222222000	CHL3 1004338812444444444444444444000	CHL3 2008677624888888888888888888000	CHL3 4017355249777777777777777777000	CHL3 8034710499555555555555555554000	CHL3 1606942099111111111111111111000	CHL3 3213884198222222222222222222000	CHL3 6427768396444444444444444444000	CHL3 1285553788888888888888888888000	CHL3 2571107577777777777777777777000	CHL3 5142215155555555555555555554000	CHL3 1028443031111111111111111111000	CHL3 2056886062222222222222222222000	CHL3 4113772124444444444444444444000	CHL3 8227544248888888888888888888000	CHL3 1645508497777777777777777777000	CHL3 3291016995555555555555555554000	CHL3 6582033991111111111111111111000	CHL3 1316406982222222222222222222000	CHL3 2632813964444444444444444444000	CHL3 5265627928888888888888888888000	CHL3 1053125577777777777777777777000	CHL3 2106251155555555555555555554000	CHL3 4212502311111111111111111111000	CHL3 8425004622222222222222222222000	CHL3 1685000924444444444444444444000	CHL3 3370001848888888888888888888000	CHL3 6740003697777777777777777777000	CHL3 1348000739555555555555555554000	CHL3 2696001479111111111111111111000	CHL3 5392002958222222222222222222000	CHL3 1078400591644444444444444444000	CHL3 2156801183288888888888888888000	CHL3 4313602366577777777777777777000	CHL3 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1554138081955555555555555554000	CHL3 3108276163911111111111111111000	CHL3 6216552327822222222222222222000	CHL3 1243310655644444444444444444000	CHL3 2486621311288888888888888888000	CHL3 4973242622577777777777777777000	CHL3 9946485245155555555555555554000	CHL3 1989297050311111111111111111000	CHL3 3978594100622222222222222222000	CHL3 7957188201244444444444444444000	CHL3 1591436400248888888888888888000	CHL3 3182872800497777777777777777000	CHL3 6365745600995555555555555554000	CHL3 1273149200191111111111111111000	CHL3 2546298400382222222222222222000	CHL3 5092596800764444444444444444000	CHL3 1018519600148888888888888888000	CHL3 2037039200297777777777777777000	CHL3 4074078400595555555555555554000	CHL3 8148156801191111111111111111000	CHL3 1629631200234444444444444444000	CHL3 3259262400468888888888888888000	CHL3 6518524800937777777777777777000	CHL3 1303704801875555555555555554000	CHL3 2607409603751111111111111111000	CHL3 5214819207502222222222222222000	CHL3 1042963801504444444444444444000	CHL3 2085927603008888888888888888000	CHL3 4171855206017777777777777777000	CHL3 8343710412035555555555555554000	CHL3 1668742022071111111111111111000	CHL3 3337484044142222222222222222000	CHL3 6674968088284444444444444444000	CHL3 1334993676568888888888888888000	CHL3 2669987353777777777777777777000	CHL3 5339974717555555555555555554000	CHL3 1067994943111111111111111111000	CHL3 2135989886222222222222222222000	CHL3 4271979772444444444444444444000	CHL3 8543959544888888888888888888000	CHL3 1708791884977777777777777777000	CHL3 3417583769955555555555555554000	CHL3 6835167539911111111111111111000	CHL3 1367034579922222222222222222000	CHL3 2734069159844444444444444444000	CHL3 5468138319688888888888888888000	CHL3 1093627739777777777777777777000	CHL3 2187255479555555555555555554000	CHL3 4374510959111111111111111111000	CHL3 8749021918222222222222222222000	CHL3 1749803837444444444444444444000	CHL3 3499607674888888888888888888000	CHL3 6999215349777777777777777777000	CHL3 1399843069755555555555555554000	CHL3 2799686139511111111111111111000	CHL3 5599372279022222222222222222000	CHL3 1119874455804444444444444444000	CHL3 2239748911608888888888888888000	CHL3 4479497823217777777777777777000	CHL3 8958995646435555555555555554000	CHL3 1791799292871111111111111111000
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Phase-1 RCT-48	1.0247414	1.1062497	1.0076649	1.0164758	1.0128443	1.0351826	0.9074085	0.9161144	1.1271183	1.2439942	1.15894	1.1309836	1.2373157
Cylin G	0.975908	0.8421604	0.7507606	0.8214876	0.9431493	0.8214876	0.8399455	0.733873	1.2200855	1.1860312	0.839449	0.7587264	1.0321546
Hypoxanthine-guanine phosphoribosyltransferase	1.2844359	0.7598425	1.2068425	1.3194538	1.0680366	0.8677289	1.2133519	1.0941155	1.0710654	1.1989468	1.0003098	1.3381767	1.469046
Tissue inhibitor of metalloproteinases-1													
ID-1	1.0256617	1.0637667	0.8853311	0.9052003	0.9089293	0.4495752	1.2678536	1.2969893	1.7725214	1.3189278	1.0796238	0.9658815	0.8922468
Ribosomal protein S9	0.9352789	0.9288913	0.786285	0.7652626	0.7161578	0.6930367	0.8339058	0.71279565	1.0206863	1.0693189	0.862748	1.1216424	0.7033586
Hemic oxygenase	0.9195357	0.9289159	0.9285519	1.2378051	1.3812014	1.1815242	1.5445988	0.80099314	0.7098509	0.846456	0.68135047	0.7032986	0.7032986
Ribosomal protein S8	0.9201754	0.8280282	0.9602325	1.0394047	1.050774	1.0755113	0.9502546	1.0263407	0.95645304	0.850286	0.6451342	0.708528	0.8411356
Ribosomal protein S17	0.972614	1.3226397	1.0485085	0.97354937	1.0957122	1.3986988	1.4529349	1.6132584	0.92988455	0.9891706	1.0293382	0.748257	0.8058668
Nucleoside diphosphate kinase beta isoform	1.0085871	1.3263733	0.8098618	0.86929286	1.0401394	1.8112528	0.96039875	1.3308282	1.308282	1.4627445	0.81920284	1.0161638	0.81920284
Phase-1 RCT-121	0.98143436	1.1838872	0.8011881	0.9788875	0.9473552	1.2103978	0.8194028	0.6837857	1.0685315	0.9283232	0.7980885	0.704084	0.8190091
14-3-3 zeta	0.91410077	0.7747436	1.15871	1.209033	1.3201778	1.1200278	1.1379392	0.8937857	0.7893507	0.7893507	0.85628835	1.0240215	0.87972903
60S ribosomal protein L6 (alternate clone 1)	1.0375687	1.3189436	1.1288561	1.090933	1.3201778	1.4044673	1.1296332	1.4860098	1.256239	1.649294	1.3278608	1.2875868	1.4328765
Beta-tubulin, class I	1.0472581	0.6586534	1.0684856	1.1932161	1.3254428	1.1732289	1.4154205	1.2183633	1.0826231	0.88108716	0.8080235	0.763424	0.9007596
Organic cation transporter 3	0.9079131	1.2529693	0.8712903	0.9759409	0.94315875	0.9528843	0.9346701	0.93855697	1.020739	1.0025445	1.0150684	0.9038324	0.8446088
Beta-actin	0.8016556	0.61157725	1.285835	1.3602705	1.2320895	1.7272073	1.5402557	1.6383622	1.3069315	1.5712489	1.0937084	1.5020322	2.5021772
Cathepsin S	0.8598919	1.383046	1.1981723	0.92364085	1.0216403	0.9178933	1.0724821	1.0241973	1.1320002	0.9817624	1.009767	0.7711089	1.0289283
Biliverdin reductase	1.137489	0.9333647	0.8804063	0.86359197	1.0341108	0.9178933	1.0724821	1.0241973	1.1320002	0.9817624	1.009767	0.7711089	1.0289283
Phase-1 RCT-154	1.0796214	0.91120344	0.95262945	0.91088825	1.072816	0.9178933	1.0724821	1.0241973	1.1320002	0.9817624	1.009767	0.7711089	1.0289283
Phase-1 RCT-283	0.91979575	0.8696334	0.8802931	0.91976327	1.0190043	1.0945841	1.1655646	1.2516011	0.2017518	1.3075413	1.1311677	0.782558	0.83146556
Annexin V	1.0575234	0.9063979	0.88142784	1.0373245	1.2310398	1.0583758	1.0654687	1.0654687	1.2516011	0.2017518	1.3075413	1.1311677	0.782558
Complement factor (CFI)	1.0184222	1.725285	1.2740351	1.1865447	1.4541011	2.0607338	1.6197568	2.1547739	1.2174488	1.0922323	1.1643742	0.93074954	0.83659323
Phase-1 RCT-276	1.243112	0.974924	0.9714992	0.98814487	1.0413838	1.0170585	1.1249913	1.0992478	0.6282446	0.7410473	0.88308685	0.7455818	0.6211877
Tyrosine aminotransferase	1.2959035	1.3298771	1.0724476	0.96258974	0.91242623	1.8962783	1.388241	1.0644546	0.48801627	0.7401934	0.6800538	0.6768891	0.5420535
Glutathione peroxidase	1.0716924	1.2789958	0.97701627	1.0771937	1.0558689	2.209182	1.9433803	1.4987365	0.62940043	0.8765597	0.8868441	0.68827294	0.87589036
Histidine-rich glycoprotein	0.7468153	1.1900531	1.3018405	1.2900843	1.0104455	1.3248773	1.7898003	1.455103	0.81582	1.1373389	0.8433569	0.8578644	0.7419937
Carbonic anhydrase III, sequence 2	0.77133447	1.1774555	1.3735047	1.2500045	0.8800258	1.2887088	1.6940872	1.3597285	0.7007298	1.0002288	0.62545525	0.72649175	0.7074983
Phase-1 RCT-62	0.87899787	0.8386039	1.1208472	1.258452	1.221912	2.2236814	1.349964	1.3778185	0.6332188	0.731468	0.8027028	0.7454977	0.7277467
Transitional endoplasmic reticulum ATPase	1.0306814	0.9265487	0.6534756	1.0526425	0.9051749	0.4549925	0.89059405	0.5551386	0.7239874	0.7764758	0.76068773	1.0063434	0.90543765
Phase-1 RCT-468	0.755934	1.689434	0.989161	1.0526425	0.9051749	0.4549925	0.89059405	0.5551386	0.7239874	0.7764758	0.76068773	1.0063434	0.90543765
Phase-1 RCT-268	1.1694963	0.4302986	1.0316544	1.4294089	1.3335036	2.3346848	1.6112038	1.8519389	1.5428101	1.212684	1.3059385	0.8325278	0.86559335
Phase-1 RCT-161	0.969137	0.3489271	0.9236227	0.9722055	0.9446381	0.83643116	0.88489	0.8251805	0.4362914	0.8760214	0.9740769	0.8676228	0.98672086
Glutathione S-transferase theta-1	0.96718778	1.893188	1.2147855	1.0707559	1.1003838	1.2500914	1.2126415	1.1744128	0.9248717	0.8811186	1.0784423	1.3632368	0.99876916
Phase-1 RCT-168	0.9266288	1.1013832	1.0374861	0.9276539	0.8724169	1.3805918	0.9202857	1.428938	0.87571926	0.1071365	0.7690098	1.0478004	0.9461369
Phase-1 RCT-182	0.8914381	0.785238	1.1693285	1.0388902	1.0436552	0.48638428	0.45830035	0.5428145	0.33948315	0.76892487	0.1168575	1.1693851	1.418105
Phase-1 RCT-81	0.88360914	1.0153191	1.661281	1.132824	1.0943579	1.173966	1.0975692	1.415412	0.8271971	0.8437587	0.9230817	0.9946584	0.9461369
Adiponectin C1	0.8914381	0.785238	1.1693285	1.0388902	1.0436552	0.48638428	0.45830035	0.5428145	0.33948315	0.76892487	0.1168575	1.1693851	1.418105
Phase-1 RCT-178	1.0680707	0.8135322	1.0388902	1.0436552	0.48638428	0.45830035	0.5428145	0.33948315	0.76892487	0.1168575	1.1693851	1.418105	1.418105
Phase-1 RCT-98	0.83005085	0.8135322	1.0388902	1.0436552	0.48638428	0.45830035	0.5428145	0.33948315	0.76892487	0.1168575	1.1693851	1.418105	1.418105
NADH-oxochromone b5 reductase	1.257724	0.77141466	1.4028802	1.2928832	1.028146	1.629108	0.85225195	0.8408684	0.8739877	0.9322353	0.9584088	1.8184929	1.3692408
Alpha 1 - inhibitor III	0.84804174	0.6894334	1.1248003	0.7630846	1.1209439	1.2511894	0.788457	1.0154248	0.8191292	0.6826256	1.1857084	1.3756301	0.8381385
Paraoxonase 1	0.9536338	0.92714288	0.84950448	1.0332477	1.1303875	1.0423687	1.2623356	1.046698	0.78845697	1.2716539	0.89125216	0.9277853	0.85268608
Prasentin-1	0.9426221	0.98646894	1.172843	1.1120678	1.2485528	1.6595335	1.0943563	1.6095389	0.48110813	0.70513844	0.83126557	0.72819877	0.47068608
Apolipoprotein C1	0.96997863	0.707868	1.1011269	0.7595058	1.1401119	1.3008289	0.781919	1.0357963	0.62119824	0.63272186	1.2118848	1.3945503	0.85690056
Cytochrome P450 2C23	0.8632489	1.3367099	0.94276963	0.92478409	0.9541435	1.1242874	0.9763322	1.4652312	0.81316507	0.96630003	0.5768477	0.6789675	0.4219784
Phase-1 RCT-227	0.9632665	0.935233	1.203295	1.0980864	0.93063428	1.3008289	0.9652505	1.4617512	0.98654136	1.154537	1.1470227	0.91520685	0.8844726
Haptoglobin	1.002895	0.9290003	1.1377639	1.1900743	0.9590226	1.0699335	1.1281025	1.0892715	0.592111	0.8671443	0.8833828	1.2955609	1.0476605
Phase-1 RCT-184	0.928035	0.492003	1.1377639	1.1900743	0.9590226	1.0699335	1.1281025	1.0892715	0.592111	0.8671443	0.8833828	1.2955609	1.0476605
Multidrug resistant protein-2	1.0270288	0.9265081	1.0273719	0.9598685	0.90437895	1.0186917	1.2043638	0.8580727	0.8356723	0.80861205	0.7676912	0.60793144	0.60793144
Inulin-like growth factor I, exon 8	1.0074447	1.121206	0.7261647	0.96575984	0.80859435	0.7806571	0.85471718	1.1311151	0.82806516	0.874259	1.5471186	1.5471186	1.5471186
N-Hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.8548319	0.5789639	1.2925777	1.1359165	1.2867465	1.0329089	0.8405347	1.4050672	1.3635078	1.083728	1.3781426	2.514955	1.9484282
Dynamin-1 (D100)	0.87878133	0.5622116	1.041908	0.9847101	1.1540767	1.667142	0.9110386	1.324219	0.57286234	0.56147367	0.81742324	0.4375308	0.4375308
DNA polymerase beta	0.9334482	0.88403215	1.182977	1.0817614	1.0112854	1.0459186	1.2497054	1.1079288	1.0890479	1.273531	1.0948918	0.98202714	0.98202714
	0.9383477	0.8648867	1.099221	1.0997407	1.1790401	1.1342585	1.1652769	1.2014688	0.6558108	0.5761695	0.649137	0.54154	0.5267847

Table 30

Phase-1 RCT-173	1.0929436	1.1953342	0.6763724	0.8572395	0.84586146	0.78841508	1.0756235	0.9421376	1.0117295	0.9951286	0.9383244	0.957581	1.0429658
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.9506218	1.0316295	1.0220616	1.0158828	1.2570282	1.010601	1.0319165	1.3948337	0.77206075	0.9951286	0.9383244	0.957581	1.0429658
Ribosomal protein L13A	0.99039034	1.2908928	1.0689436	0.91830444	0.90430732	1.1720923	1.1090939	1.2660726	0.8335803	1.3975661	1.286034	1.0661944	1.3550946
Phase-1 RCT-144	1.151601	0.8738892	0.7689096	0.8912505	1.0473132	0.8092386	0.8513365	0.8927374	1.02725378	1.0661944	1.286034	1.0661944	1.3550946
C-H-ras	0.9039095	1.2324426	1.034875	0.766245	1.0378163	1.2128017	1.0702139	1.1055426	1.5174942	1.06558	1.1980947	0.9823877	0.9488818
Vesicular monoamine transporter (VMAT)	1.1387581	1.1460407	0.8107876	0.8502917	0.8238393	0.608297	0.63682455	0.5051228	0.94901315	0.9502435	1.009556	0.789795	1.0115222
Phase-1 RCT-230	1.0440537	1.0490493	0.9898519	0.882055	0.83030648	1.07048	0.89311755	0.7068651	0.7068651	0.7068651	0.7068651	0.7068651	0.7068651
Phase-1 RCT-273	1.0424255	1.047841	0.8037833	0.8097687	0.80285623	0.81585795	0.80572724	0.6712488	1.2828422	1.1635735	0.9258457	0.9142418	0.8302892
Phase-1 RCT-74	0.89450916	0.9511952	0.8137845	0.82183343	0.7314288	0.74918455	0.80381356	0.7170701	1.1212586	1.0687692	0.86084793	1.2854668	1.2468661
Phase-1 RCT-80	1.0373288	0.8282343	0.75404874	0.84409285	0.7191585	0.49883604	0.52746034	0.42911285	1.1422623	0.9200924	0.8888863	0.82745075	0.86678417
Phase-1 RCT-158	1.0437828	1.0557498	0.8455753	0.71460307	0.7126881	0.4477178	0.70504	0.62728594	0.8392227	0.9200924	0.8888863	0.82745075	0.86678417
Deoxyxylidase kinase	0.8847535	1.3911669	0.95576865	0.73356555	0.57601928	0.5741494	0.5040903	0.6211178	0.8078478	0.89514376	0.8988767	0.8234322	0.80177474
Inositol polyphosphate multikinase (IpMK)	1.1097759	1.089413	0.83908215	0.9712557	0.8709334	0.70077413	0.58686286	0.1014438	0.8885843	0.8234322	0.80177474	0.8234322	0.80177474
Neuronal cell adhesion molecule (NCAM)	1.0985524	1.1552904	0.8472847	0.9344101	0.77242476	0.58680473	0.58717655	0.4500072	1.40490174	1.070978	1.2435246	0.866316	1.3118813
Hepatocyte growth factor receptor	1.0912337	1.0919375	0.75514984	0.7909001	0.8112965	0.63384614	0.71690136	0.6988836	0.8756652	0.8504569	0.8927421	0.5855477	0.69348055
Erbb3	1.2983223	0.9481708	0.71650815	0.9637261	0.6380948	0.3932228	0.5490136	0.6988836	0.8756652	0.8504569	0.8927421	0.5855477	0.69348055
Dopamine receptor D2	0.91758424	1.0688014	1.288776	0.99327105	0.8423516	1.0376074	0.717465	0.91884814	0.7782905	0.92602897	1.0337011	1.566027	1.2188352
Phase-1 RCT-51	1.1216084	1.2764157	0.9288092	0.9281629	0.9345058	0.8927864	0.7485346	0.6978371	1.1926165	1.1183248	1.1867868	0.9234445	0.72154474
Four repeat ion channel	1.0984821	0.9321443	0.8378926	0.94028568	0.84883595	0.8638932	0.841983	0.7481159	0.8832525	0.5908822	0.7885378	0.7852765	0.8572603
Adrenomedullin	0.88726646	1.0187354	0.7991801	0.7794185	0.72570527	0.48632413	0.35605956	0.43738618	0.8844217	0.8656974	0.8168596	0.8620859	0.8285923
Caveolin-3	1.1272727	0.988612	0.852927	0.8659703	0.7840585	0.8065294	0.7899287	0.848837	0.8844217	0.8656974	0.8168596	0.8620859	0.8285923
Phase-1 RCT-129	0.97034454	1.0733023	0.873758	0.9114183	0.8816788	0.61336786	0.58884795	0.45815372	0.847071	0.83932585	0.8391607	0.8958478	0.9321862
Phase-1 RCT-84	1.0761821	1.0140477	1.0537896	0.98803626	0.84225705	0.75757426	0.9321176	0.779914	1.1638553	1.0424013	1.1108382	1.000618	0.8668041
Sarcolemmal reticulum calcium ATPase	1.1046536	1.2388212	0.7767752	0.9020266	0.8054299	0.8054299	0.8054299	0.6655023	0.5874282	0.8316159	0.85848945	0.839563	0.70846304
Phase-1 RCT-79	1.0655485	1.1044827	0.8851334	0.8202766	0.7093791	1.0533371	0.9218101	0.9391303	1.277705	1.0332048	0.89768237	0.8619828	0.9046735
Phase-1 RCT-151	1.30544828	1.4805549	1.3878107	1.5103964	1.4458624	1.582094	1.3081772	1.806033	1.0736395	1.2212894	1.3622112	1.3387156	1.3972065
Phase-1 RCT-70	0.8046334	0.93851134	1.2450597	1.220766	1.1477699	1.1294598	1.3158205	1.3222811	0.7676245	1.0689184	1.0650002	1.3622112	1.3387156
Phase-1 RCT-150	1.2681221	1.138845	1.2715904	1.1109089	0.89135533	0.8608721	0.9198619	0.95665727	0.801842	0.8145287	0.97053397	0.91659779	0.8695302
28-hydroxyvitamin D3-1 alpha-hydroxylase	0.8796793	0.9750084	1.316284	0.66008885	0.6032083	0.44700158	0.59572697	0.3160334	1.273542	0.78379827	1.395339	1.395339	1.17773
Phase-1 RCT-119	1.2812715	1.463993	1.2806688	1.4231595	1.3485521	1.3986951	1.259328	1.3204329	1.008458	1.3546298	1.6487688	1.7884314	1.831078
Peroxisomal 3-ketoad-CoA thiolase 2	1.2437271	1.2767972	1.3612028	1.1638541	1.0428578	1.4888884	1.7698917	1.318787	1.853188	1.6007047	1.5657765	2.0770254	2.388041
Phase-1 RCT-146	1.1216372	0.94090116	0.9052534	0.9263146	0.828578	0.86318034	0.67482126	0.80256884	0.76394853	1.13851	1.0848345	0.99561137	0.928236
Superoxide dismutase Mn	1.055785	0.92080878	1.0501142	1.1508815	1.020537	0.46896783	1.2420714	1.4487889	2.1168458	1.3065054	1.07055	0.8830745	1.1008889
Phase-1 RCT-115	1.2022802	1.1684269	0.8007443	0.82830036	0.8219888	0.83147819	0.78717947	0.6068915	1.4136889	1.3248555	1.0619855	0.8247751	0.9801185
Alpha-1 microglobulin/bikunin precursor (Ambp)	1.0553844	1.0075696	1.309138	1.2299662	1.1759246	1.2644727	1.1695609	1.595321	0.84121884	0.8851407	0.97985405	1.0083066	1.0017376
Phase-1 RCT-18	1.0614014	0.88593116	0.8133482	0.899887	0.84881943	0.7789029	0.8348345	0.63296765	0.84240415	1.0310903	1.147552	1.1832576	1.1665549
Maspin	1.0006512	1.1326327	0.70717466	0.7416843	0.7030837	0.6214419	0.5607887	0.43492183	0.5991913	0.72490086	0.88182724	0.89171388	0.99801257
Decorin	0.9874561	1.561749	0.77859825	0.8544032	0.7804724	1.1117791	0.94237095	0.801643	1.2596266	1.0449852	0.7440512	0.85643363	0.71875536
Retinoid X receptor alpha	1.0117213	1.1125053	0.74512468	0.76403894	0.7571999	0.5269519	0.7193953	0.57638997	1.3541282	1.2984206	0.8934974	1.0533887	1.1798888
Cellular nucleic acid binding protein (CNEP)	0.80328168	0.9625547	0.82452528	0.94545438	0.9946363	1.185766	1.0124442	1.1418208	1.2765658	1.3339355	1.132881	1.0423511	1.544057
NADPH cytochrome P450 oxidoreductase	1.2859615	1.0381535	0.8404747	1.0047662	0.8294338	0.88215466	1.2095521	0.88571453	2.3435296	1.283408	1.30055	0.8324445	1.4023287
Malic enzyme	0.86689713	0.8448037	0.8208502	1.056676	1.0648317	0.84227176	1.084177	0.7438758	0.6504022	1.2512875	1.0812892	1.4043353	1.389287
Caspase-1	1.060287	0.7753337	0.6901801	0.66550856	0.64040124	0.450087	0.827227	0.54272825	1.028149	0.925042	0.83638874	1.094771	0.77904253
Gystatin C	0.8840182	1.305763	1.0180334	1.0073808	1.0566552	1.1830461	1.3474911	1.3913218	0.782246	0.8039421	0.7685951	0.75428398	0.7280702
p53COC	1.0464994	0.9041542	0.8815635	0.8545544	0.89039576	0.59866517	0.7725676	0.5744194	0.87234044	0.8665102	1.0827497	1.3310878	1.0144697
Poly(ADP-ribose) polymerase	1.2161178	0.82018905	0.81418333	0.86372894	0.81016974	0.82213336	0.9020714	0.7391128	1.2570182	1.2958785	1.1662009	1.2624797	1.3923514
Tissue plasminogen activator	0.98470285	0.545482	0.97774684	0.96920765	0.86666775	0.8675138	0.86666775	0.65165746	0.7850498	0.859322	1.1769537	1.084984	1.0941912
Multidrug resistant protein-1	0.9745482	1.1220059	0.82150996	0.9007806	0.8758368	0.8379168	0.880262	0.7493398	1.465797	1.632828	1.04808	1.608449	2.2682688
Phase-1 RCT-207	1.15841	1.0431026	0.8285792	0.8247715	1.0709904	0.656521	1.0031072	0.857376	1.1393545	1.142051	0.9087128	1.086831	1.1804184
Phase-1 RCT-181	1.123718	1.2649677	1.2847123	1.080941	1.097428	1.5076785	1.15043	1.3004628	1.1043947	1.0776227	0.8573988	0.8868824	1.0868824
Gap junction membrane channel protein beta 1 (Gjbl)	0.76381028	0.978082	0.9524975	0.8614083	0.701770454	0.8494991	1.2726886	1.2105608	1.0653778	0.95280375	1.0058433	1.5589992	1.5384856
Aquaporin-3 (AQP3)	1.0041261	0.982584	0.9388656	1.0083629	0.8272347	0.752017	0.8131149	0.69612336	0.99689846	1.0529689	1.06555448	0.9555655	1.0711559
Myelin basic protein	0.9694349	0.9333465	1.09219324	0.8544151	0.88134223	0.9146091	0.9606793	1.077372	1.077372	1.0502258	1.2511829	1.0923484	1.0923484
Calgranulin B3	1.0698605	0.99071074	0.8544627	0.81946356	1.0137887	0.8585514	1.0158228	0.9827769	1.165072	1.1004846	0.8280866	1.188935	1.1874337

Table 30

Phase-1 RCT-156	0.88913226	0.97993904	1.0628765	1.166371	1.0607066	1.0753598	1.1165774	1.2155776	0.81754094	0.8660827	0.9578367	1.1086513	1.025024
Proteasome activator 28 alpha	1.0299863	1.1651612	1.0516393	0.89906655	0.9541479	1.4470261	1.0177208	1.1904894	0.9647846	1.0198134	0.90878756	0.8000342	0.75129265
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=naec, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint																
(1)	CHLOR 8		CIS 10		CIS 2.5		CIS 2.5		CIS 2.5		CIS 2.5		CIS 2.5			
	no	49	no	337	no	338	no	327	no	328	no	1847	no	1848		
Compound-Dose (2)																
Animal Number (3)																
Liver Toxicity Inflammation Classification (4)																
Gene Name (5)																
1.1046603	1.2052789	1.1860007	1.3744085	0.98387387	0.85660315	0.85786255	1.1535496	0.86661056	0.98780825	0.98780825	0.98780825	0.98780825	0.98780825	0.98780825	0.98780825	
Betaine homocysteine methyltransferase (BHMT)																
1.2408244	2.003269	1.2810035	1.28565	1.352231	1.283014	1.2850422	1.2850422	1.2725201	1.2725201	1.2725201	1.2725201	1.2725201	1.2725201	1.2725201	1.2725201	
Proliferating cell nuclear antigen gene																
0.8505263	1.164426	0.882758	1.083172	1.0461584	0.9053529	1.2146882	1.0792869	1.0722216	0.9720536	0.9720536	0.9720536	0.9720536	0.9720536	0.9720536	0.9720536	
Cytochrome P450 2C11																
0.820505	0.9225624	0.682182	1.1304383	0.992913	1.2354817	1.2354817	1.2354817	1.0619928	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	
Cytochrome P450 2C11																
0.7622972	0.8203092	0.4685978	1.4810358	1.0994801	1.3281355	1.3041102	1.2284174	1.0619928	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	0.86086357	
Phase-1 RCT-290																
1.2652078	1.685468	1.1615051	1.3182094	1.283954	1.436283	1.2102562	1.552627	1.168259	1.2014552	1.168259	1.168259	1.168259	1.168259	1.168259	1.168259	
Phase-1 RCT-59																
1.10851	2.8039736	1.3675672	1.74321	1.2717853	1.4722927	1.1641364	1.0482131	1.0875286	1.1551739	1.0875286	1.0875286	1.0875286	1.0875286	1.0875286	1.0875286	
Beta-actin, sequence 2																
1.110062	0.45788177	0.46024336	0.5994557	0.509926	0.6217098	1.1984866	1.0889608	1.0459635	1.0459635	1.0459635	1.0459635	1.0459635	1.0459635	1.0459635	1.0459635	
Phase-1 RCT-292																
1.0773232	0.90443907	1.0375394	0.8857089	0.98703265	0.8678346	0.9083416	0.9533739	0.9533739	0.9533739	0.9533739	0.9533739	0.9533739	0.9533739	0.9533739	0.9533739	
Pyruvate kinase, muscle																
0.8766296	1.2759343	1.0484035	1.2100815	1.0045757	1.052737	0.94588827	0.8116155	0.8898287	0.942643	0.9053036	0.942643	0.9053036	0.942643	0.9053036	0.942643	
Osteocalcin																
1.2759236	1.1182581	1.1104393	1.0045757	1.052737	0.94588827	0.8116155	0.8898287	0.942643	0.9053036	0.942643	0.9053036	0.942643	0.9053036	0.942643	0.9053036	
Calgranulin B1																
0.97015893	1.0528066	1.1025147	0.8458125	0.8457502	0.83987945	1.188314	1.2653108	1.1048447	1.3528906	1.1048447	1.3528906	1.1048447	1.3528906	1.1048447	1.3528906	
Apolipoprotein AII																
0.9653257	0.47031394	0.54350656	0.9963548	0.41325614	0.8210438	0.98628576	1.0646089	1.1456043	1.5678413	1.1456043	1.5678413	1.1456043	1.5678413	1.1456043	1.5678413	
Comixin-32																
2.2222517	1.1624762	1.2041072	1.0712598	1.2815711	1.1313622	1.1734303	1.0917556	1.3087727	0.8224684	1.3087727	0.8224684	1.3087727	0.8224684	1.3087727	0.8224684	
Phase-1 RCT-109																
0.99574478	0.780382	0.80021884	0.8250554	0.8415879	0.7643262	1.1699779	1.1654125	1.2552323	1.2139848	1.2552323	1.2139848	1.2552323	1.2139848	1.2552323	1.2139848	
Glycine methyltransferase																
1.1641561	1.811817	1.5532175	1.0997128	1.06804695	0.9911111	1.1862054	1.0725687	1.1761612	1.2632767	1.1761612	1.2632767	1.1761612	1.2632767	1.1761612	1.2632767	
L-glutamate-gamma-lactone oxidase																
0.5167248	0.5856889	0.58572144	1.0657681	0.9789438	1.0981514	1.2589348	1.0928915	1.1418664	0.8633941	1.0928915	1.1418664	0.8633941	1.0928915	1.1418664	0.8633941	
Phase-1 RCT-256																
1.3728611	1.1307608	0.9834428	0.8702308	1.012399	1.0309921	1.0444078	0.9214882	0.8887597	0.85974544	0.8887597	0.85974544	0.8887597	0.85974544	0.8887597	0.85974544	
Carbonic anhydrase III																
0.44591433	0.051819053	0.138172002	1.1051059	1.1634916	1.3714368	0.57772005	1.1484063	1.0025443	0.32918364	1.0025443	0.32918364	1.0025443	0.32918364	1.0025443	0.32918364	
Phase-1 RCT-78																
0.92867523	0.7371724	0.7373639	0.8495824	0.92334944	0.93141353	0.8343665	0.8308009	0.809614	0.76759773	0.809614	0.76759773	0.809614	0.76759773	0.809614	0.76759773	
Urinary protein 2 precursor																
0.655899	0.48339478	0.8897038	0.0798078	0.7999079	0.9519141	0.9855038	0.7242854	0.8438141	0.8935291	0.7027428	0.8935291	0.7027428	0.8935291	0.7027428	0.8935291	
Insulin-like growth factor I																
0.98472077	0.5471235	0.7578089	0.84487363	0.7896087	0.7365284	0.9629328	0.8276528	0.8441771	0.709424	0.8276528	0.8441771	0.709424	0.8276528	0.8441771	0.709424	
Ap1 subunit/transformase																
0.6335943	1.5849424	1.3692552	1.158797	1.0672654	1.2337188	0.7449919	1.0098825	0.7877736	0.68150408	0.7877736	0.68150408	0.7877736	0.68150408	0.7877736	0.68150408	
Phase-1 RCT-185																
0.6202152	0.7933736	0.8620742	1.1752863	1.114459	0.995571	0.8421781	1.0098825	0.7877736	0.68150408	0.7877736	0.68150408	0.7877736	0.68150408	0.7877736	0.68150408	
Cofilin																
1.1252747	0.99164957	0.99898984	1.0472826	1.1864688	1.0473363	0.86866355	0.834597	0.8333951	0.82778074	0.8333951	0.82778074	0.8333951	0.82778074	0.8333951	0.82778074	
Stathmin																
1.059409	0.9191238	0.7821424	0.8710316	0.92822076	0.98036754	1.1681102	1.1712971	1.1342403	1.2866173	1.1342403	1.2866173	1.1342403	1.2866173	1.1342403	1.2866173	
60S ribosomal protein L6																
0.9174951	0.8691675	0.8812295	0.9938114	1.0259949	1.0444078	0.9214882	0.8887597	0.85974544	0.8815091	0.85974544	0.8815091	0.85974544	0.8815091	0.85974544	0.8815091	
Calpain I heavy chain																
1.1736633	0.8249015	0.8825272	1.044323	1.1516588	1.0419444	1.1298008	1.2350848	1.1065453	1.1848924	1.1065453	1.1848924	1.1065453	1.1848924	1.1065453	1.1848924	
Callogen type II																
1.502278	0.849789	0.9271452	0.91625893	1.0397073	0.89678498	1.1748592	1.279971	1.4810424	1.5041149	1.4810424	1.5041149	1.4810424	1.5041149	1.4810424	1.5041149	
Phase-1 RCT-179																
0.8557208	0.8943745	0.9263911	1.0046568	1.008543	0.92348918	0.8913968	0.8809685	0.9182175	0.8827379	0.9182175	0.8827379	0.9182175	0.8827379	0.9182175	0.8827379	
Voltage-dependent anion channel 2 (Vdac2)																
1.0871247	0.874212	0.8707937	0.9022591	0.8375227	0.9576865	0.9989374	0.9973521	1.0182475	0.9135254	1.0182475	0.9135254	1.0182475	0.9135254	1.0182475	0.9135254	
Phase-1 RCT-192																
1.0632883	0.8341894	0.96610045	0.8649849	1.0301207	0.8978588	0.8298914	0.88000645	0.8240222	0.8857568	0.8240222	0.8857568	0.8240222	0.8857568	0.8240222	0.8857568	
Adenine nucleotide translocator 1																
0.320892	0.8319002	0.86665076	0.8325614	0.8396254	0.91104126	0.846284	0.8268118	0.8383368	0.7078828	0.8383368	0.7078828	0.8383368	0.7078828	0.8383368	0.7078828	
Thymosin beta-4																
0.82402194	1.0117003	1.0462619	1.1307688	1.0323272	1.0620955	1.1096052	1.1831346	1.071186	1.257415	1.071186	1.257415	1.071186	1.257415	1.071186	1.257415	
High affinity IgE receptor gamma chain																
0.47224215	0.7321135	0.8595916	0.84152544	0.89578974	0.8361509	0.87503284	0.93550694	0.9104615	0.8462659	0.93550694	0.9104615	0.8462659	0.93550694	0.9104615	0.8462659	
(FcR(gamma))																
1.3606876	0.8725988	0.87725048	1.0468225	0.81138715	1.0323488	1.065595	0.8131885	0.6825843	0.73520576	0.8131885	0.6825843	0.73520576	0.8131885	0.6825843	0.73520576	
Gamma-actin, cytoplasmic																
1.0051489	0.8663276	0.88762605	1.0399705													

Phase-1 RCT-68	1.131174	1.2067308	1.1530347	1.0702885	0.97308487	0.9851946	1.0056945	1.0786638	0.9824663	0.9798814	1.0528821	1.0203846	1.0251151
Cytin G	4.5148763	3.8423028	1.7405057	1.6237637	2.174272	1.145204	1.1982176	1.0930597	1.1584087	1.0313311	1.058146	0.96947217	1.1536936
Hydroxanthine-guanine phosphoribosyltransferase	1.0344555	0.91684236	0.9804955	0.9804955	1.1982176	1.0930597	1.1584087	1.0313311	1.058146	0.96947217	1.1536936	0.9240628	0.9240628
Tissue inhibitor of metalloproteinases-1	0.9027147	1.1491008	1.1942402	1.1484313	1.2812355	1.1108104	1.2563466	1.2317134	1.0989803	1.2504544	1.170394	1.5331633	1.6432718
ID-1	0.6073376	1.1173414	0.946865	0.89172703	1.1324303	1.07685	1.1143397	1.1305015	1.2850647	1.2504544	1.170394	1.5331633	1.6432718
Ribosomal protein S9	0.96098413	0.9585394	0.968707	0.9807337	1.086347	1.043813	1.0404313	1.051549	0.8443036	0.839428	0.8355011	0.854371	0.81878424
Heme oxygenase	0.8348862	0.6515168	0.811832	0.1072074	0.7239071	0.2740924	0.2740924	1.0051638	0.85919213	1.4941287	1.1594455	1.2341359	1.212103
Ribosomal protein S8	0.7508855	0.9130253	1.053887	0.1076859	1.0726333	0.9038856	0.8443019	0.8887519	0.8039578	0.7431343	0.8851135	0.8904044	1.0054064
Ribosomal protein S17	0.8643263	0.890869	1.0431285	1.0816877	1.1004155	0.9278806	0.72199	0.7845028	0.70329165	0.6856877	0.7487198	0.8571934	0.9221901
Nucleoside diphosphate kinase beta isoform	0.8702327	0.9791521	0.9163883	1.0042728	0.9377444	1.044165	1.0115452	0.8876292	1.0326612	0.7672204	0.9762628	1.0866206	1.1055046
Phase-1 RCT-121	0.7716884	0.84135364	1.165737	0.9101036	0.6704568	0.78731585	1.3171731	1.048874	1.236854	0.787089	0.8652605	1.165069	0.9098716
14-3-3 zeta	1.0825241	0.8331554	0.9063475	1.0202873	1.0058603	0.615413	1.2368373	1.226884	1.4380044	1.2682808	1.2953125	1.171941	0.804948
60S ribosomal protein L6 (alternate clone 1)	1.2176965	0.8761747	0.185927	0.85783037	1.0378847	0.88881533	0.9341015	0.92822125	0.8602765	0.9282013	1.051178	1.0348081	1.0740368
Beta-tubulin, class I	0.8339337	0.7040052	0.65838313	1.2305417	1.4083989	0.8479913	1.434988	1.2262316	1.0499283	0.9871375	1.1816227	0.98546576	1.1240833
Organic cation transporter 3	0.919661	1.1004934	1.1000855	0.95017093	0.8810325	0.8892357	0.9863742	0.93810058	0.8824397	1.2534969	1.0936893	1.0776142	0.80030314
Beta-actin	1.790281	0.6332651	0.80887814	0.8520429	0.7971788	0.90041953	1.0866628	1.0317171	1.0713162	0.8696831	0.87213945	0.82056704	0.7010646
Cathepsin S	0.7716884	0.84135364	1.165737	0.9101036	0.6704568	0.78731585	1.3171731	1.048874	1.236854	0.787089	0.8652605	1.165069	0.9098716
Biliverdin reductase	0.8025396	0.85972095	0.9688	0.9758207	1.0025079	1.149812	1.1565095	1.2131974	1.18346	1.0727723	1.0841044	1.1548634	0.857626
Phase-1 RCT-154	0.93150353	1.6071781	0.8995516	0.988833	1.1784314	1.258482	1.0729707	1.0543393	1.5428135	1.7016653	0.980823	1.0320558	0.8797327
Phase-1 RCT-233	0.8717872	0.83339549	0.98752856	0.8974085	0.9986078	1.0307724	0.98968485	0.9035178	1.0815789	1.0157541	1.1558373	1.2325428	0.8797327
Annexin V	0.800424	0.9315673	0.8978122	0.974618	1.0688605	1.0157284	1.0552477	0.97888164	0.9139581	0.7842762	1.0576888	0.81553086	0.879828
Complement factor I (CFI)	0.7522709	1.4982016	1.5795404	1.0675982	1.0992205	1.0474553	0.7289937	0.7553384	0.76086044	0.78234595	0.7873687	1.0323981	1.5285076
Tyrosine aminotransferase	0.5911197	1.0033212	1.0846745	0.90858406	0.9572055	1.0321404	0.7762138	0.8028705	0.7734639	0.8004484	0.811806	0.8193951	0.8606985
Glutathione peroxidase	0.68929005	1.4551281	0.811867	0.6207599	0.8624698	0.8259102	0.76084685	0.74464804	0.617814	0.6788321	0.84249856	0.7028334	1.1251333
Histidine-rich glycoprotein	0.7604451	0.73526186	1.0727704	0.6544653	0.9232768	0.6975322	0.64163538	0.7801621	0.8259325	0.71487427	0.87722594	0.7642844	1.1241731
Carbonic anhydrase III, sequence 2	0.8508734	0.9928936	0.8529598	0.698088	1.1557374	0.95104504	0.74108833	0.711471	0.5758847	0.6533731	0.9984049	0.94907254	0.78312134
Transitional endoplasmic reticulum ATPase	0.80316705	1.0076284	0.86487945	0.860886	0.7286985	0.9720888	0.71065684	0.7024112	0.5402746	0.67191875	0.9762584	0.9745663	0.9355537
Phase-1 RCT-92	0.89025116	0.94507825	0.9420495	0.8281453	1.034709	1.0096718	0.98089198	0.9268824	1.1286395	0.9040257	0.9789411	0.8933263	0.84984874
Phase-1 RCT-88	0.85428414	0.9013882	1.0038286	0.8281453	1.134709	1.0096718	0.98089198	0.9268824	1.1286395	0.9040257	0.9789411	0.8933263	0.84984874
Phase-1 RCT-296	0.82991173	0.57272066	0.3800804	0.6970166	0.89120723	0.776596	0.74913937	0.8279072	0.69537186	0.7275635	1.0232421	0.85831317	0.8051984
Phase-1 RCT-181	0.88541343	0.5727275	0.7287635	1.1508103	1.084225	1.2054623	0.76059175	1.574305	0.8720694	0.7477766	0.75947538	1.0921286	0.8364811
Glutathione S-transferase theta-1	0.81950456	0.88728015	0.75801805	1.2502365	1.0684329	0.95071383	1.137063	0.9233455	0.8401488	1.0542271	1.1357182	1.0091138	0.9878088
Phase-1 RCT-188	1.086602	0.9765564	1.0514191	0.7662099	1.100435	1.078074	0.92515707	0.723892	0.8456505	0.8373128	0.8979309	0.94970105	0.90428005
Phase-1 RCT-182	0.78648275	0.97400734	1.1060288	1.180335	1.072028	0.885785	0.99510376	0.7957155	0.8957844	0.625537	0.83987416	0.82137454	0.8741778
JNK1 stress activated protein kinase	0.55782764	1.3835706	1.1870356	1.3321251	1.0617493	1.3050778	0.8081523	1.0172044	0.8792163	0.7572866	0.9421601	0.9865907	1.088008
Phase-1 RCT-81	0.8308981	0.9318418	0.95309424	1.0348674	0.96597175	0.98131007	0.7887504	0.8524849	0.81988355	0.7464432	0.8136552	0.8398508	1.0787896
Phase-1 RCT-33	1.2280055	0.78550036	1.1182579	0.800114	0.9499743	1.0281783	0.959888	0.9672343	1.073124	1.2744461	1.1710119	1.1115937	1.1870098
Phase-1 RCT-178	0.6846035	1.0814548	1.0787522	0.92587346	0.8940013	0.9688999	0.91648066	1.5698549	0.809707	1.3597638	0.8871184	1.192361	0.8258484
Apolipoprotein CIII	0.6345932	1.3020456	1.1004078	1.028612	1.2384449	1.1380144	0.998946	1.2352805	0.7963184	1.5180202	1.3597181	1.1804477	0.8667428
Phase-1 RCT-98	1.2760043	1.0712806	0.8484035	0.95956933	0.86939853	0.9625843	0.8962525	1.1390287	0.97551895	0.9327056	0.9330033	0.74957633	1.0460153
NAADH-cytochrome b5 reductase	1.178955	0.9962897	1.1360167	0.9152859	1.0551361	1.172808	0.94821666	1.1902897	0.97551895	0.9327056	0.9330033	0.74957633	1.0460153
Alpha 1 - inhibitor III	1.016634	0.38240438	0.52450687	0.96590346	0.957235	0.89593315	0.7723797	0.86010504	0.9536354	0.3854582	0.7111975	0.77325094	1.0637507
Phase-1 RCT-233	0.86119886	0.9662281	1.1845598	1.0131819	1.2574339	1.0784715	0.7825517	0.95253015	0.85845107	0.8946501	1.0414444	0.8898511	1.1859805
Paraoxonase 1	0.69551567	0.5435456	0.9548219	0.82047024	0.8091533	0.91163015	0.73536223	0.80039714	0.7640103	0.5735722	0.788089	0.84113846	0.8978377
Preseitin-1	1.060371	0.39001957	0.53276515	1.015062	0.90795544	1.10757	1.080104	0.9091533	0.80039714	0.7640103	0.5735722	0.788089	0.84113846
Apolipoprotein C1	0.3613508	0.90795544	1.10757	1.080104	0.9091533	0.91163015	0.73536223	0.80039714	0.7640103	0.5735722	0.788089	0.84113846	0.8978377
Cytochrome P450 2C23	0.8913941	0.98810744	1.3112999	1.0025927	1.0532854	0.83622473	0.8833555	0.8507431	0.84780663	0.72309476	0.7749894	0.8826123	1.1488648
Phase-1 RCT-227	0.877337	0.6307741	0.83027476	0.85281023	0.8281875	1.4431889	0.62456024	0.8046629	0.73706776	0.6250025	0.6572302	0.8640105	1.4124557
Hepatic lipase	0.9544236	0.445822	0.506307	0.6977836	0.7120589	0.787928	0.9243546	0.84973603	0.7688718	0.65060966	0.8107191	1.0134116	1.0134116
Phase-1 RCT-184	0.74804484	1.5542841	0.8148999	1.1766024	1.0593404	1.0946931	1.0061892	1.2746598	0.8711573	1.1829319	1.0593283	0.89552735	0.89552735
Multidrug resistant protein-2	1.3940147	0.8602737	0.892227	1.4538156	1.2765114	1.1861275	1.2755394	1.1055968	0.971001	1.1528162	0.9448585	0.87419757	0.7588685
Insulin-like growth factor I, exon 8	1.8007165	0.80086787	0.8080932	1.7890393	0.7734194	0.78440005	1.1516338	1.5192351	0.9594874	1.0930792	0.900346	0.94355494	0.94355494
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.4997667	0.24251516	0.74012812	1.045023	0.8228173	0.6236875	0.8657607	1.1063266	0.926724	0.7114425	0.932791533	1.2160424	0.8281893
Dynamin-1 (D100)	0.9068612	1.0457865	1.0395935	0.92254754	0.98992526	0.92052871	0.8388914	0.9803608	0.8043146	0.9282762	0.9725013	1.1697279	0.9282762
DNA polymerase beta	0.6668899	0.8902088	0.9707441	0.87101516	1.0331366	0.98597377	0.8545055	0.89730585	0.8598738	0.7472458	0.9479275	0.91563918	0.9285508

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Phase-1 RCT-173	0.9518989	0.84376767	0.7948872	0.967313	1.2230926	0.638992604	1.2271923	1.5148808	1.310106	1.3240677	1.031273	1.2627386	0.78852004
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.6448802	1.0160138	0.96207766	1.0563993	1.0078319	1.0030817	0.9885704	0.9760462	0.9373851	1.00141	0.96355456	1.026611	0.8535652
Ribosomal protein L13A	1.2000957	0.7102276	0.75035554	0.8126704	0.84428275	0.78677577	1.2804015	1.2024813	1.2459906	1.3866826	1.226462	1.254413	1.0101775
Phase-1 RCT-144	0.89174616	0.8721893	0.99213924	0.95813924	0.9081757	0.9081757	1.0481767	1.02096	1.03398	1.0877481	0.9817022	0.94910115	0.84380754
c-H-ras	0.8813393	0.94447684	0.7078655	0.9005063	0.877667	0.857755	0.8304117	0.88357514	0.9035408	1.087437	1.0532024	1.122163	0.968065
Vesicular monoamine transporter (VMAT)	0.91665014	1.4281339	1.0118891	1.3628063	0.93271637	0.975552	0.7998657	0.87706465	0.9774108	1.1895904	1.0912193	1.0380503	1.11314
Phase-1 RCT-273	1.5044357	1.0264226	0.98941416	1.1943201	1.0058334	1.0467157	0.7072998	1.0578459	0.9870295	1.3565368	1.0136758	1.038598	1.2969216
Phase-1 RCT-230	1.550924	0.6616602	0.7698878	1.100251	0.91216063	0.93524484	1.1342637	1.1564318	1.3820038	1.0917663	1.0846314	0.998303	1.11314
Phase-1 RCT-74	1.3794237	1.2219793	1.1068512	1.226753	1.0095928	0.8400375	1.1575801	1.1997324	1.1105489	1.1866032	1.0552747	1.0518601	0.9821108
Phase-1 RCT-80	1.1060416	1.1570258	0.775662	1.2538731	0.7413942	0.8382842	1.1120284	1.1107833	0.95377004	1.3833706	1.0163708	1.130221	0.9810921
Phase-1 RCT-158	0.9206581	0.84000105	1.0382578	0.95930713	0.98453294	0.8085285	1.114682	1.0775684	1.3184736	1.276175	0.9519823	1.0738997	0.9235282
Deoxyribosyl kinase	0.7611672	1.427285	1.280158	1.2013588	0.9336226	1.1194558	1.0860738	1.0679104	1.0854478	1.4654478	1.1512971	1.0983377	1.1361107
Inositol polyphosphate multikinase (Ipmlp)	1.1489974	1.1121787	0.94391155	1.3128158	0.98078175	1.0392489	1.0297005	1.0677855	1.02713096	1.4118607	0.82324007	1.1074896	1.0153747
Neuronal cell adhesion molecule (NRCAM)	1.2744156	1.3911322	1.3809712	1.356106	1.0359925	1.2910234	1.2124594	1.2340171	1.132991	1.7819421	1.0090247	1.2770205	0.95437354
Hepatocyte growth factor receptor	0.7679553	1.0067781	1.1784058	1.2700106	1.145827	1.0801301	1.0181377	1.0353161	1.0801752	1.1594852	1.1182726	1.120872	1.012018
Empty	1.0718068	1.1873058	0.98074246	1.1215959	0.91223866	0.94738334	1.4732691	1.5083389	1.0935992	1.6437294	1.0201893	1.0094267	0.9281148
Dopamine receptor D2	1.1789442	1.1774334	0.929183	1.2145463	0.8699167	1.0299872	0.94813883	1.027237	0.90187216	0.7007183	0.93413794	0.92060614	1.0576889
Phase-1 RCT-51	1.192184	1.3217887	1.1747984	1.2258068	0.8416891	1.0847242	0.97425134	0.9690396	0.923803	0.97180088	0.9418178	0.8738144	1.1042428
Four repeat ion channel	0.734738	0.9836154	0.8915488	1.0704885	0.8516864	0.901418	0.9518161	1.0060996	0.8924786	0.9402884	0.86058207	0.9271146	0.8607537
Adrenomedullin	0.6688355	1.4675817	0.796326	1.4602786	0.739044	1.059397	1.0401658	1.0170588	0.8758973	1.4053328	0.91289973	0.926124	0.8742067
Caveolin-3	0.96048334	1.1055185	0.97333896	1.4777848	0.8351688	1.0829431	1.183573	1.0487099	1.2486302	1.0346008	0.9739134	0.9777281	1.043068
Phase-1 RCT-129	1.1013538	1.135348	1.1420649	1.1048384	0.9564208	0.93836338	1.0679153	1.0009713	0.9528745	1.2188941	0.9668978	1.026842	0.9422112
Phase-1 RCT-64	1.0647491	1.178504	1.0795206	1.0428271	0.98387556	1.0030878	0.9938159	1.0211622	0.9751607	1.1923228	1.060986	1.0851582	1.0424882
Sarcolemmal calcium ATPase	0.96682127	1.2629875	1.0713195	1.3339821	0.8538076	1.1220438	1.1204333	1.1005944	1.1599048	1.0859425	0.92587423	0.92587423	1.0368115
Phase-1 RCT-79	1.447911	1.1213571	1.0604285	1.1549208	0.9356404	1.0937089	0.89717532	1.097089	0.89717532	1.0300813	1.09605	0.96536577	0.957282
Phase-1 RCT-252	1.2739732	1.600134	1.2020537	1.1396049	1.0951732	1.0997089	0.89717532	1.098812145	1.0433177	0.7213442	0.94939214	0.8336971	0.972833
Phase-1 RCT-161	1.294545	0.9740885	1.1309174	1.1652548	1.2874113	1.2554277	1.0391046	0.99189027	1.0281897	0.9056748	0.8675452	0.90831804	0.89015603
Phase-1 RCT-70	1.5265485	0.87608378	1.0092011	1.0515031	1.081892	1.0895936	1.3925475	1.3414444	1.2982451	1.171881	1.1658045	1.133873	1.043068
Phase-1 RCT-150	1.102915	1.0968777	0.8085188	1.1071941	1.1317338	1.1717665	1.1208013	1.1547896	1.013249	1.0805985	1.0067703	1.1887648	0.9453448
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.005469	1.0041981	0.9884227	1.0943385	1.238398	1.0607567	1.4753537	1.3537247	1.2237674	0.7978933	1.0281103	1.1371837	0.9871875
Phase-1 RCT-119	1.5450387	1.428825	1.224233	1.163386	0.8748984	1.0822283	0.8922862	0.818378	0.84456374	1.7792873	1.3212163	1.4983813	1.0512481
Paroxysmal 3-ketoadipyl-CoA thiolase 2	2.1004007	0.7543756	0.8453533	0.7759175	1.1537603	1.0252225	1.0796294	1.5029897	1.3313035	1.3172163	1.4983813	1.321091	0.96505078
Phase-1 RCT-146	0.9908797	1.027553	1.1039728	1.0772121	1.053468	1.1527086	1.1001357	1.0400429	1.071872	1.2046663	1.0714042	1.2168474	0.96505078
Superoxide dismutase Mn	1.0682863	0.825608	0.7303486	0.84856397	0.9799485	1.0036833	1.2586926	1.2849411	1.166982	1.1716781	1.3808808	1.6336645	1.240112
Phase-1 RCT-115	1.1028341	1.1413223	1.0382129	1.1505951	0.9276585	1.1020787	1.3178125	1.2960416	1.3447566	1.514087	1.245586	1.2537808	1.1450356
Alpha-1 microglobulin/bikunin precursor (Amlp)	0.8396561	0.8637073	0.8681382	1.042535	1.0688413	1.0188049	0.6906387	0.8181381	0.7653707	0.6550689	0.7689587	0.81099564	1.08457
Phase-1 RCT-18	1.1465908	0.8913575	1.0807004	0.9892096	1.0165082	0.9942715	1.016809	0.95523306	0.9545182	0.932156	1.021927	0.9167369	0.9853706
Mapin	0.7286008	1.3186811	1.0204993	1.2000164	1.030389	1.0130857	1.022442	0.98044497	0.9222945	1.162441	1.0565958	1.1056882	1.0072879
Decorin	1.4273762	1.2786009	1.0950603	1.1839974	0.7684189	1.3463237	1.213892	1.383144	1.1731165	1.5448929	1.0811687	1.4252745	1.0785158
Retinoid X receptor alpha	1.110618	1.2881144	1.1556427	1.5137112	1.2851967	1.4408302	1.190143	1.0538983	0.8893356	0.9261656	1.0119324	0.963858	0.95283196
Cellular nucleic acid binding protein (CNBP)	1.0320048	0.5765657	0.6329265	0.6918434	0.8244982	0.8398458	1.0338737	1.0708843	1.0039876	0.824282	0.94300425	0.90082854	0.9564708
NADPH cytochrome P450 oxidoreductase	1.4679936	4.2863363	2.155624	1.7849357	2.2371613	1.165602	1.1942163	1.3285527	1.1679114	1.4738023	1.3815774	1.1445841	1.0086842
Malic enzyme	1.5438358	0.91913766	0.7524164	0.9922412	0.83871526	0.7388915	1.445719	1.0355898	1.486601	1.4985488	1.3085384	1.0225002	0.8128473
Caspase 1	0.7655454	0.9724986	0.76630355	1.0411969	1.1404732	1.0935359	1.3996022	1.384889	1.3909407	1.597923	0.9881916	1.176501	1.0095466
Cystatin C	0.68037186	0.8072313	0.79567366	0.8566871	0.7771387	0.83010894	0.7090629	0.8142077	0.8513537	0.8775722	0.8173381	0.87276906	1.0188778
P55CDC	0.81099894	0.9122131	0.8337832	1.0840508	0.85782945	1.023355	1.195758	1.1232865	1.0638914	0.865053	1.051605	1.1683073	0.76761365
Poly(AOP-ribose) polymerase	1.4138901	0.8254679	1.0871538	0.9685372	1.0537622	0.8870325	1.0127122	1.1415848	1.0408271	1.276317	1.0518146	1.0717046	1.0317184
Tissue plasminogen activator	1.1032641	0.712432	0.9047335	0.9071759	0.9685372	0.8870325	0.98778294	0.9892371	0.9383816	0.9388584	0.7707032	0.854374	0.9573944
Multidrug resistant protein-1	1.3436774	1.1580913	1.2589249	1.6463925	1.5138085	1.339587	1.2185552	1.281876	1.3986751	1.7395991	1.0477154	1.0138571	0.7813795
Phase-1 RCT-207	1.1089808	2.438507	1.4879091	1.1143587	1.2281461	1.2290782	1.2428196	1.1699588	1.1118057	1.3672787	1.0244389	1.0584684	0.8946782
Phase-1 RCT-181	1.005287	1.2084018	1.2430782	0.917936	0.9655241	0.9626801	0.9835884	0.9468581	0.787271	0.8076877	0.8943081	0.87546884	1.0188245
Gap junction membrane channel protein beta 1 (Gjb1)	1.4494507	1.5120715	1.5512198	1.6457258	1.7433121	1.3343745	1.6338853	1.4142183	1.8770565	1.237116	1.2809743	1.1502087	1.280927
Aquaporin-3 (AQP3)	1.025233	1.0010842	0.9862442	0.9657677	0.81474362	0.9864455	0.9686655	0.91958936	1.2083824	1.0216213	0.85523483	1.0117893	0.96895
Myelin basic protein	1.0404423	0.7622866	0.8129028	0.8082132	0.9794773	0.7421188	0.9788816	0.9320137	1.1608403	0.851077	0.96451175	0.8302322	0.96895
Calgranulin B3	1.1750648	0.894459	0.9393415	1.0054494	1.0625972	1.0682446	1.0905841	0.9863055	0.9688905	1.2205892	0.9979483	0.9530891	0.8905773

Table 30

Phase-1 RCT-159	0.8187415	0.84877424	0.880612	0.8612908	0.88149294	0.8027278	0.6866788	0.78615984	1.0449444	0.7806898	0.986241	0.9010282	0.8623205
Protease activator 28 alpha	0.8089116	0.8669007	0.99706423	0.9244762	0.92602235	1.0346128	0.89401793	0.94185823	0.90381473	1.0916772	0.9480881	0.9465617	0.98037937
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 29).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 hr: yes-recr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint															
(1)	Compound-Dose (2)		Animal Number (3)		Liver Toxicity Inflammation Classification (4)		CLOZ 180		CLOZ 45		CLOZ 45		CLOZ 45		CPHOS 25
	no		no		no		no		no		no		no		
Phase-1 RCT-107	1.149151	1.0776573	1.0481966	1.1180023	0.8649762	0.9785928	1.0210359	0.90473366	1.048173	1.1784516	1.5059857	1.0753106	1.1687845	1.1687845	CPHOS 25
Betaine homocysteine methyltransferase (BHMT)	1.7944863	1.945179	1.9863094	1.7894177	1.3536216	1.3929266	1.4566138	1.6326904	0.7499064	0.46002632	0.7332347	1.1806445	0.8981399	0.8981399	CPHOS 25
Proliferating cell nuclear antigen gene	0.83714166	0.8042437	0.93625015	0.9030359	1.0363377	0.8616212	0.8769084	0.8773213	0.8769084	1.0029533	1.0029533	1.078667	0.6518063	0.6518063	CPHOS 25
Cytokines P450 2D11	0.9855009	0.9148473	0.8539489	0.78476954	1.0616637	0.9233606	0.8977037	1.489196	0.94311735	0.94311735	1.0029533	0.86710545	0.95697365	0.95697365	CPHOS 25
Cytochromes P450 2C18	1.1099946	1.2041823	1.3018594	0.96562137	0.9814552	0.84364184	0.74420537	0.7910663	0.7113905	0.41482708	0.8752399	1.0046109	1.0602225	1.0602225	CPHOS 25
Phase-1 RCT-290	1.3311437	1.6472455	1.2627106	1.4786121	1.1982678	2.2492093	1.2438068	1.3814807	0.68736166	0.707785	0.8376409	1.171331	0.9259006	0.9259006	CPHOS 25
Beta-actin, sequence 2	1.1171469	1.051562	0.7542857	1.543077	0.7655157	0.8769731	0.94884837	0.97562057	0.97562057	1.0053984	0.9667854	0.9537131	0.9767633	0.9767633	CPHOS 25
Phase-1 RCT-292	0.97034746	0.81273097	0.93685965	0.98209788	1.0093821	1.1307719	0.8901724	0.8868564	1.009516	0.7894247	0.7894247	1.0184118	0.99046504	0.99046504	CPHOS 25
Pyruvate kinase, muscle	1.0755103	0.9978729	0.9510486	1.1326665	1.1530368	0.8362132	0.830407	0.8624185	0.8362132	1.092735	1.092735	0.8234384	0.8948138	0.8948138	CPHOS 25
Osteocalcin	1.1242033	0.9710834	0.8345597	0.782278	1.183362	1.0677803	1.07436	1.0371344	0.9707277	1.0191628	0.80258	1.0614388	1.084738	1.084738	CPHOS 25
Calgranulin B1	1.1567681	1.049017	1.0216249	1.0071342	1.3007137	1.4891303	1.2686309	1.0545096	1.3016441	1.0436045	1.02224	0.9385828	1.0281457	1.0281457	CPHOS 25
Apolipoprotein AII	1.7778276	1.1358485	1.2525221	0.8341456	1.0258114	1.0280152	1.2074348	0.91918063	0.8719711	0.5681277	0.8412033	0.78596055	0.9667626	0.9667626	CPHOS 25
Phase-1 RCT-109	1.403792	1.0283118	0.93303144	1.0447824	1.2618375	0.9413737	0.90716755	0.8334389	1.0854123	2.6924303	1.2238283	1.0486752	1.0043887	1.0043887	CPHOS 25
Glycine methyltransferase	1.1760866	1.2301499	1.0666521	1.0455092	1.1681853	1.2973869	1.2906782	1.0865146	1.1318149	1.038586	0.707365	1.163463	1.02853	1.02853	CPHOS 25
L-glutono-gamma-lactone oxidase	1.212035	1.1284148	1.1744595	1.2875259	1.0426061	1.0489518	1.3136109	1.040423	1.1597422	1.3797086	3.240681	1.183634	1.3246374	1.3246374	CPHOS 25
Phase-1 RCT-256	1.0424203	1.0930835	1.6085007	1.3140291	1.1589993	1.2339021	1.6513638	1.3744438	0.8719711	0.5681277	0.8412033	0.78596055	0.9667626	0.9667626	CPHOS 25
Carbonic anhydrase III	1.2407776	1.333512	1.188568	1.2210838	1.2614039	1.0690426	1.3514035	1.1027033	0.8774717	0.8054679	0.95484877	0.92215168	0.9428005	0.9428005	CPHOS 25
Phase-1 RCT-78	1.0927727	0.8995155	2.1884947	0.7704223	0.7025983	1.0275047	0.80738035	1.1335784	1.0108628	0.30586762	1.4828331	1.2970838	1.4900255	1.4900255	CPHOS 25
Urinary protein 2 precursor	1.0483266	1.0379056	1.708239	1.0708239	1.0231851	0.87800074	0.9706608	0.8481087	0.91521424	0.9973647	0.82684636	0.8988479	0.89756	0.89756	CPHOS 25
Insulin-like growth factor I	0.8280381	0.93172044	0.9908615	0.8540394	1.0543938	1.3941047	1.4625309	1.5045375	0.88287955	0.8977327	0.7282732	0.90231204	0.90231204	0.90231204	CPHOS 25
AVI sulfotransferase	0.88651425	0.7816437	1.0052006	1.0791662	1.2078078	1.3889232	1.4390445	1.2932276	1.193389	1.2277859	0.748145	0.72861236	1.1460044	1.1460044	CPHOS 25
Phase-1 RCT-185	1.2514228	1.2578873	1.5401074	1.5617064	0.9696009	1.0853333	1.298542	1.5198141	1.5402005	1.4059364	1.3828734	1.0466972	1.0501949	1.0501949	CPHOS 25
Coflin	0.205121	0.89989663	1.1251785	0.9769723	0.80216485	1.0439078	1.2004417	1.0444567	0.8633061	0.74328594	1.440312	0.8524653	1.0381277	1.0381277	CPHOS 25
Statmin	0.8236337	0.82355025	0.8232282	0.8721833	0.8004902	1.138056	0.9754817	0.9394297	1.0119145	0.9382416	0.9355767	0.8624392	1.044689	1.044689	CPHOS 25
60S ribosomal protein L6	0.8236337	0.82355025	0.8232282	0.8721833	0.8004902	1.138056	0.9754817	0.9394297	1.0119145	0.9382416	0.9355767	0.8624392	1.044689	1.044689	CPHOS 25
Calnexin heavy chain	1.1515946	0.8509998	0.8183888	0.8415784	0.9023886	0.92098178	0.88459285	0.87316436	1.0145407	0.8728239	0.83148265	0.9177923	1.0078622	1.0078622	CPHOS 25
Collagen type II	0.99287858	1.1111845	0.8272776	0.8608191	0.8539287	0.69595973	0.7718536	0.94758147	0.948458	0.8832895	0.623841	0.71562433	1.1839757	1.1839757	CPHOS 25
Phase-1 RCT-179	0.80528176	0.8416873	0.84694713	0.90748304	0.8005166	1.0118148	1.048945	1.0120175	0.863916	0.92711278	0.88229235	1.0019364	1.182563	1.182563	CPHOS 25
Voltage-dependent anion channel 2 (Vdac2)	1.1358946	0.957106	1.0704443	1.0278729	1.2044339	1.1356978	1.0617926	0.97890834	1.0414862	1.0057883	1.1076004	0.9748928	1.0902036	1.0902036	CPHOS 25
Phase-1 RCT-192	1.0517389	1.0852984	0.8683664	1.0092735	1.3018557	1.1356978	1.0617926	0.97890834	1.0414862	1.0057883	1.1076004	0.9748928	1.0902036	1.0902036	CPHOS 25
Adenine nucleotide translocator 1	0.8258902	0.8006287	0.7190591	0.7845273	1.1589027	0.8508092	0.81142119	0.789343	0.90855086	0.7590513	1.1668199	0.9027349	1.0615395	1.0615395	CPHOS 25
Thymosin beta-10	1.0114425	0.9842529	0.7140514	0.97533035	1.071989	0.9593848	1.0070457	0.9062398	1.0258489	0.86577076	0.65518845	1.1450222	1.2015641	1.2015641	CPHOS 25
High affinity IgE receptor gamma chain (FcεR1γ)	1.0861608	0.9284319	1.1244863	1.070685	0.9305428	1.0997562	0.97643757	1.0102549	0.8734647	0.8866277	0.9763599	0.88368237	1.105533	1.105533	CPHOS 25
Gamma-actin, cytoplasmic	0.82630765	0.695773	1.0573552	0.7921193	0.8282278	1.4135207	1.2651862	1.1447126	0.873388	0.62081463	0.6508007	0.8709148	0.9287542	0.9287542	CPHOS 25
Uncoupling protein 2	1.0299327	0.9465458	0.8618864	1.0083333	1.1621724	1.213779	0.8315023	0.9946378	0.8637684	1.005228	0.7241208	0.9759121	1.023186	1.023186	CPHOS 25
Phase-1 RCT-34	1.1175959	1.1429194	1.2022213	1.052614	1.250895	1.5820279	1.418841	1.2077016	1.1332252	1.0744706	0.7235947	1.1774309	0.9857163	0.9857163	CPHOS 25
Phase-1 RCT-31	1.4463298	1.0565658	1.3770648	1.1930419	1.2871331	1.4907316	1.6270742	1.9893837	1.1855191	0.5952443	1.0089076	1.0071859	1.2888056	1.2888056	CPHOS 25
Cyclin D1	0.88607014	0.5582502	0.6728055	0.88404185	0.8954247	1.3009304	0.9810533	1.098371	0.8798755	1.0254151	1.018848	0.91503716	1.1055043	1.1055043	CPHOS 25
IgE binding protein	1.3287609	1.1711911	1.2024622	1.1438808	1.5231959	1.0014509	0.81917086	1.0498218	0.93519	1.0812954	1.0955513	0.8478718	1.0076778	1.0076778	CPHOS 25
Zinc finger protein	0.8663756	0.91790426	0.7956351	0.941107	0.9406952	1.0014509	0.81917086	1.0498218	0.93519	1.0812954	1.0955513	0.8478718	1.0076778	1.0076778	CPHOS 25
Phase-1 RCT-138	1.0840216	0.9785684	1.0485007	1.0338886	1.104476	1.0235408	0.82779448	1.0145628	0.93519	1.0812954	1.0955513	0.8478718	1.0076778	1.0076778	CPHOS 25
Alpha-tubulin	0.8622245	0.81602595	0.89751	0.9065345	0.7659338	1.1389464	0.82728267	0.5871934	1.1977708	0.7655984	0.81886244	1.1459824	1.0066224	1.0066224	CPHOS 25
Alpha-enolase	0.9818807	0.8513381	1.0214623	1.1052212	0.97068	0.9378611	1.0330721	1.462225	0.90855086	0.7590513	1.1668199	0.9027349	1.0615395	1.0615395	CPHOS 25
Calpain 2	0.9630903	0.9845938	0.8874826	0.8618121	1.0530019	0.99711855	0.9743212	1.073631	0.94898317	0.837706	0.9203762	0.8252988	0.9835944	0.9835944	CPHOS 25
Phase-1 RCT-12	1.0097767	1.0286527	1.001728	1.0018955	1.1101678	1.1355	1.0437195	0.8413268	1.1386274	1.0071388	1.0244678	1.1829742	0.976689	0.976689	CPHOS 25
Calnexin B	1.0097767	1.0286527	1.001728	1.0018955	1.1101678	1.1355	1.0437195	0.8413268	1.1386274	1.0071388	1.0244678	1.1829742	0.976689	0.976689	CPHOS 25
Phase-1 RCT-24	0.92838645	0.5967894	0.96355137	1.0015018	0.807865	1.2737138	1.0266135	0.7375114	1.2347034	0.8340559	0.892236	1.2605088	1.0780993	1.0780993	CPHOS 25
Melanoma-associated antigen ME491	0.8895932	0.87279665	0.82045536	0.82789116	1.5788665	0.9851688	0.9846998	1.0029311	0.8571029	0.8831681	0.91645175	0.99445647	1.072674	1.072674	CPHOS 25

Table 30

Phase-1 RCT-48	1.0465014	0.9752444	1.0027404	0.92813534	0.9344307	1.0706102	0.98654664	1.0344718	1.0300975	1.0448085	1.0561926	1.0736389
Oxylid G	0.9751925	1.1377568	1.1415504	0.9821067	1.0444382	0.9321075	0.93114805	0.86325528	1.30701	1.30701	1.30701	1.076832
Hypoxanthine-guanine phosphoribosyltransferase	0.957009	0.9645646	0.9603361	0.9592635	0.8918157	0.86518307	1.0289867	0.91702825	0.772777	0.8641161	0.91272867	0.9762885
Tissue inhibitor of metalloproteinases-1	1.3461661	1.3057308	1.0563725	1.0857068	1.0451751	0.978981	0.8826237	0.8989735	0.8955073	1.0427619	1.1461836	1.1971234
ID-1	0.97306955	0.89925035	0.9114001	1.0458348	1.0790147	0.85776407	0.90383645	0.7786043	1.4221331	1.31170003	1.2024378	0.88279176
Ribosomal protein S9	1.078667	0.9962908	0.7682277	0.83904227	0.9893905	1.0048176	0.8002284	0.8158283	1.016121	0.75641123	0.9905695	1.162817
Heme oxygenase	1.178355	0.99780095	1.340186	1.0582203	1.680988	1.3180335	0.9512541	1.0570935	1.161487	1.3533763	1.5083226	1.2587101
Ribosomal protein S8	0.90872806	1.0782147	1.0580435	1.024273	1.080711	1.432913	1.2853463	0.9450952	0.8646163	0.94513181	0.9876852	1.2300474
Ribosomal protein S17	1.0857216	0.9458616	1.0104731	0.8323593	1.0690004	1.8353303	1.8597183	1.0338591	1.0638468	0.9413181	0.9515101	0.85148814
Nucleoside diphosphate kinase beta isoform	1.2404032	1.0605989	0.9876356	1.0319128	1.0883458	0.860248	0.778236	0.81024283	0.9768757	0.86193786	0.9664263	1.0120844
Phase-1 RCT-121	0.83271724	0.7945927	0.9014308	0.87944408	1.0883166	0.931588	0.778236	0.81024283	0.9768757	0.86193786	0.9664263	1.0120844
14-3-3 zeta	0.8432838	0.7632357	0.9167286	0.8578238	0.84956574	1.0354699	0.8428893	0.7429416	1.2411304	0.823343	0.7916370	1.2948081
60S ribosomal protein L8 (allanata clone 1)	0.8471768	1.1301306	1.1238925	1.1153563	1.06916	1.196444	1.1591252	1.1706502	0.988825	0.8357151	0.83716448	1.019827
Beta-tubulin, class I	0.0841737	0.86356674	1.2325181	1.2749845	1.1082929	1.303133	1.0861418	0.7138693	1.1614804	0.85389615	0.88796015	1.2561872
Organic cation transporter 3	0.846184	0.8776594	0.8461388	0.90434164	0.82333884	0.8288421	0.91209847	0.91209847	1.0059855	0.8789255	0.92841044	0.9521025
Beta-actin	0.8523393	0.86816293	0.78435916	0.79108464	0.6980713	1.1827764	0.81428265	0.72150904	1.3811171	0.9341973	0.7267597	1.255621
Cathepsin S	0.9115765	0.78955226	1.2878482	1.1388571	1.0732069	0.8223536	0.8180137	0.76017064	1.0460138	1.0217098	1.1510504	1.0388556
Blivudin reductase	0.888672	0.8304743	1.008118	0.94693977	0.99117565	0.91416128	0.72437806	0.75817318	0.881697	0.82032045	1.000472	1.052407
Phase-1 RCT-154	0.9004101	0.92674893	0.80102865	0.86803675	0.95691437	0.9158813	0.8100393	0.9374222	1.0453738	0.8485645	0.87015758	0.97508377
Phase-1 RCT-283	1.21768	1.1872828	1.103168	1.0544103	1.148001	1.088589	1.039677	0.9873254	0.89125533	0.9388975	0.9429922	0.86703813
Arctin V	0.9014699	0.9790916	1.0081031	1.2588427	1.0384034	0.9261032	0.7893922	0.826871	1.2057784	1.0090778	1.0097118	0.9073522
Complement factor I (CFI)	1.4868111	1.1485963	1.3063542	1.0145908	1.2674281	0.97545385	0.88907144	1.328581	1.3277539	1.0681023	1.2611715	0.8888846
Phase-1 RCT-278	0.94202658	0.81921843	0.9200143	0.952874	0.9144834	0.8684145	0.85847676	0.944128	0.97832327	0.8095152	1.0670692	0.98826817
Tyrosine aminotransferase	1.4782602	1.192839	1.7458975	1.0891622	1.021973	0.7408487	0.7712617	2.4160882	1.43665	0.7283484	1.4258858	0.83316045
Glutathione peroxidase	1.0601014	0.8482028	0.8478081	0.9047897	1.185374	1.043384	1.3336021	1.0920597	1.4337538	1.608403	1.3508771	0.92851393
Histidine-rich glycoprotein	0.94221683	0.7628121	1.1678214	1.2197368	1.3413714	1.1519202	1.4847784	0.73222654	1.021283	0.9585619	1.4232892	0.7521074
Carbonic anhydrase III, sequence 2	0.7203424	0.72897863	1.112851	1.0796521	1.043724	1.040903	0.9476881	0.95694953	0.95352525	1.3044713	0.7394772	0.9097453
Phase-1 RCT-92	1.02154014	0.96236034	1.0286801	1.00396021	1.076047	1.012608	1.0195107	0.924875	0.9433003	0.90017184	0.80687946	0.87884213
Transitional endoplasmic reticulum ATPase	0.9198292	0.7803372	0.8057104	0.8861389	0.7642841	0.8977891	0.7533063	0.74097486	0.9095313	0.86341904	0.9474051	0.9733001
Phase-1 RCT-48	0.9794189	0.8107174	1.032673	0.9828074	0.9739388	0.9719857	1.452212	0.8339893	0.9125274	0.7538893	1.150812	0.8611348
Phase-1 RCT-286	0.83898456	0.7562841	0.5736187	0.62815785	0.80754163	0.83134356	1.1530658	1.0242623	0.9508846	1.030126	1.29638	0.6580084
Phase-1 RCT-161	0.9905848	0.978108	1.0688778	0.9084508	0.8781754	1.0168979	0.93084566	0.98098684	0.99134296	0.444804	1.2786991	1.3184544
Glutathione S-transferase theta-1	1.0359811	0.913502	0.97895798	1.0232378	0.8789417	0.8082108	0.8649103	0.7386064	1.053044	0.57618154	0.742128	1.0518857
Phase-1 RCT-168	0.93217887	0.8914628	0.8766484	0.99335396	0.9986931	0.8274715	0.9707628	0.9416988	0.95938387	1.0170912	0.8320199	0.85805744
Phase-1 RCT-182	1.0320381	0.8722419	1.1453551	0.9798813	0.78770965	1.11889	0.9004785	0.9433003	0.90017184	0.80687946	0.87884213	0.7894576
JNK1 stress activated protein kinase	1.1040957	1.2033893	1.5390178	1.4406067	0.9046421	1.0180285	1.1655323	1.1550738	1.218078	1.0832772	1.3566513	1.1547185
Phase-1 RCT-81	1.2808801	0.9892294	1.0518415	0.933387	1.0308301	0.95928484	1.0236173	1.0524891	0.972534	0.80452	0.90817595	0.80367204
Phase-1 RCT-33	1.0312929	1.1231512	1.0037721	1.0676316	1.2376853	1.1033571	0.9893931	0.8323888	0.9089862	0.8384954	0.77574676	0.81515703
Phase-1 RCT-178	0.7637366	0.7128105	0.6449059	0.70181566	0.47209433	1.0043938	0.8668991	0.8427623	0.9555103	0.77312875	1.4248247	1.3438107
Apolipoprotein CIII	0.8842183	0.78328866	1.0141903	0.9184669	0.728012	0.73658746	0.85100678	0.92862475	0.97832664	0.9833701	0.93715113	0.86615604
Phase-1 RCT-88	0.9725523	1.0189484	1.3127183	1.0089843	1.3378121	0.92722815	1.079321	1.0396978	0.869492	1.040548	0.84693017	0.955545
NADH-cytochrome b5 reductase	1.2347658	1.0278974	1.03221	1.0141063	1.3359842	0.8372537	1.0157341	0.8461232	0.8405781	0.78651774	0.9881854	0.78171396
Alpha 1 - inhibitor III	0.9753797	0.9111553	0.87021675	0.9830928	1.0273386	0.8233888	0.9089862	0.7786999	0.69308984	0.8384954	0.77574676	0.81515703
Paraoxonase 1	0.94599695	1.2541065	1.2895048	1.0728384	0.9382872	0.8817461	1.091518	1.0655489	0.8085756	0.9278531	0.97001004	0.93864944
Presepsin-1	0.0257082	0.8088424	0.9410453	1.0143371	0.8137819	1.0672224	1.4343208	1.688217	1.032124	1.0188024	1.4682071	0.820721
Apolipoprotein C1	1.1686412	0.9258915	1.0375314	0.98488016	1.3093697	0.8586785	0.9622176	1.3341583	0.699565	0.86272125	0.7827065	0.7375243
Cytochrome P450 2C23	1.9600082	1.128233	1.2010529	1.12132804	0.7663356	0.8682153	0.8384923	0.8415523	0.84070383	0.9282882	1.0739247	0.8772105
Phase-1 RCT-227	1.0763364	0.7897656	1.0262516	0.97521764	1.146323	1.0035026	0.8478655	1.0660838	1.0574307	1.1282246	1.1485952	0.9097371
Hepatic lipase	1.2002728	0.822784	0.95028	0.98028	0.984734	1.177139	1.2272613	1.4298489	0.854015	0.75575125	0.8849203	0.87077606
Phase-1 RCT-164	0.9201593	0.7172263	0.79681226	0.75823828	0.70732707	0.8325823	0.708178	0.8040875	0.7831	0.73216507	0.8288894	1.2311554
Phase-1 RCT-164	0.8174788	0.8440923	1.0004438	0.8788387	0.8506673	0.8505662	0.9055823	0.7644439	1.4428737	0.8737898	0.92708025	0.9083982
Mitochondrial protein-2	0.8323587	0.8363004	0.6773307	0.856035	0.9304552	1.040785	0.8804286	0.9938333	0.7544388	0.8737898	0.92708025	0.9083982
Insulin-like growth factor 1, exon 6	0.9658594	0.8064049	0.8523994	1.0844959	1.5016441	1.6981125	2.865922	1.7243525	1.0918908	1.5580198	0.72560538	0.8712807
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.90909913	0.8302577	1.1063388	0.985314	0.8514448	1.3889546	1.0619073	1.7789648	0.81500823	1.2847359	0.8115046	1.2367915
Dynamin-1 (D100)	1.0278473	1.2025849	1.2312182	1.1141444	1.0117599	0.9570832	1.0458424	1.0422245	0.98050725	0.8392251	0.90168473	1.0454576
DNA polymerase beta	0.85654384	0.95113976	1.0150286	1.016863	1.0287015	0.9771063	0.97429897	1.0313795	0.9856734	0.7708165	0.9134087	0.55219574

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Phase-1 RCT-173	0.8587228	1.2032716	0.8001115	0.9233563	1.127942	0.8348309	0.8314083	0.8482657	1.0492277	0.7612543	0.8040261	1.2387823	0.7943308
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.0132768	0.908407	0.8161327	0.92129185	1.0369884	1.0264703	0.9279189	0.8954985	1.1445509	0.8334487	1.2033888	1.0826395	1.070683
Ribosomal protein L13A	1.0958662	1.0986358	0.9600459	1.0378356	1.1930781	1.3920814	1.3130094	1.072849	1.2496665	1.0832107	0.8488608	1.2520446	1.1315837
Phase-1 RCT-144	0.83101547	0.8012767	0.709106	0.918478	0.800933	0.7151425	0.8707077	0.9719178	0.9692096	0.9787308	0.8355247	0.98859054	0.97190997
c-H-ras	1.0092757	0.8590686	0.9471373	0.9408022	0.898658	0.7151425	0.8707077	0.9719178	0.9692096	0.9787308	0.8355247	0.98859054	0.97190997
Vesicular monoamine transporter (VMAT)	1.1338751	1.2545631	1.2455946	1.1479207	0.986858	0.986858	0.986858	0.84845101	0.8918461	1.043497	1.043497	1.043497	1.076474
Phase-1 RCT-273	1.0542128	1.0564817	1.0515783	0.9440258	1.132596	1.132596	1.132596	1.1248944	1.1686825	1.2128037	1.0854612	1.0903808	1.158474
Phase-1 RCT-230	1.0771128	1.0527806	1.0646818	0.978135	1.132596	1.132596	1.132596	1.1248944	1.1686825	1.2128037	1.0854612	1.0903808	1.158474
Phase-1 RCT-74	1.0833321	1.0955734	0.9514165	0.8511567	1.2056108	1.0676416	0.857636	0.8272587	0.85761225	1.1571332	0.88866127	1.1171075	1.0580235
Phase-1 RCT-80	1.0078875	1.3588881	0.9855559	0.9363434	0.9564724	1.049113	0.8578868	0.1038615	0.8268917	1.042771	1.0073289	1.0500203	0.96288326
Phase-1 RCT-159	0.91571325	1.0091028	2.7691146	0.9360166	0.962226	0.8926824	0.9734426	0.9478313	0.9478313	1.0007977	0.9139073	0.9139073	0.9139073
Decarboxylase kinase	0.87794283	1.0594297	0.8170002	0.7899597	1.0396848	0.9734426	0.9478313	0.9478313	1.0007977	0.9139073	0.9139073	0.9139073	0.9139073
Inositol polyphosphate multikinase (IPMK)	1.1212322	1.0160018	0.9197037	0.9516663	1.0131873	1.2438421	1.1883481	1.2690628	0.9268028	1.023167	1.2363676	0.9458972	0.9458972
Neuronal cell adhesion molecule (NCAM)	1.060072	1.0439296	0.8710128	0.91398114	0.9710869	1.1451086	1.0547122	0.9263542	0.91055846	1.151828	0.94078165	1.151771	1.2064876
Hepatocyte growth factor receptor	1.031222	0.98801917	0.93896395	0.98480044	1.0513182	1.2442266	1.0406326	0.888333	1.0040404	1.182307	1.0434984	0.983193	0.983193
Empty	0.9476206	1.0778885	0.7744355	0.7918503	0.92562765	0.7409768	0.6183052	0.6153425	0.75580845	1.2273412	1.0227839	1.1774741	0.98138024
Dopamine receptor D2	1.0943636	1.0532422	1.2075763	1.095395	1.0013114	1.0251024	1.2509086	1.3713233	1.0130244	1.0753838	0.9848938	1.0387026	0.96631557
Phase-1 RCT-61	1.0915668	1.1180296	1.087897	1.0718944	1.03217	1.032483	1.0871383	1.15836	1.0025875	1.1697028	1.1206105	1.0474118	1.1001169
Four repeat ion channel	1.0070904	1.068003	1.0010755	0.98818673	1.0483146	1.0233454	1.0463538	1.0290865	0.88489795	1.1051854	0.99643046	0.9538825	0.9538825
Adrenomedullin	1.0425404	1.1009158	0.7726535	0.8235152	0.9892268	0.82889634	0.72833354	0.8106758	0.7673565	1.3415383	1.0004045	1.1629822	1.0892714
Caveolin-3	0.84518788	1.0400517	0.9715819	0.9463735	0.945814	1.0240574	1.036203	1.056117	0.8462345	1.0895288	0.9860757	0.9742462	0.9860757
Phase-1 RCT-129	0.964761	1.008353	1.00116	0.95267856	0.9416374	1.085347	0.9848735	0.0211821	0.90337807	1.1472322	0.9873825	0.9884304	1.0887701
Phase-1 RCT-94	0.9144707	1.0813103	0.8441234	1.0183525	1.00221	0.89285233	1.0440488	0.965924	1.0272152	1.0482861	1.0331916	0.9300781	0.9106534
Sarcoplasmic reticulum calcium ATPase	1.2081785	1.1811261	1.2784787	1.1232965	1.125141	0.9417867	0.9758787	1.3062958	1.2591596	1.276561	1.1629725	1.2539784	0.9953642
Phase-1 RCT-79	1.0953317	0.96503055	1.0272384	0.9859048	1.023502	1.2188888	1.2533156	1.0555558	0.8286273	1.1325424	0.9751518	1.0439707	1.0398025
Phase-1 RCT-282	1.0387315	1.0934927	1.1735065	1.1422117	1.1287588	1.4076272	1.3048832	1.5548088	1.057868	0.9230821	1.1529491	0.97885186	1.0168336
Phase-1 RCT-151	0.8652386	0.8096145	0.8923086	0.93627003	1.0146756	0.85150877	0.93189486	0.882176	0.9247688	0.97801346	0.98344444	0.864511	1.024739
Phase-1 RCT-70	1.3406388	1.0954427	0.992836	0.9671054	1.029768	1.1322354	0.785178	1.0523827	1.0008053	1.2625088	0.97800694	1.087514	0.9883068
Phase-1 RCT-150	1.3680816	1.0406252	1.0435623	0.760978	1.1879137	0.9871276	0.96571016	0.9880821	1.1398891	1.1850135	1.0500845	1.1672313	0.9923308
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.0408454	1.0713623	0.8331588	0.8968193	0.94095463	0.85885246	1.047382	0.9787872	0.8978722	1.074305	0.9554612	1.024396	0.9016675
Phase-1 RCT-119	0.828861	1.227718	1.2186819	1.015886	1.126309	1.2887026	1.0742362	1.2860165	1.0480802	1.0612222	1.1417114	1.0388194	1.0218001
Peroxisomal 3-oxoacyl-CoA thiolase 2	1.0540267	1.3543302	1.3191373	1.157259	1.1085894	0.8900809	1.0016161	0.88041055	1.1045488	1.0387013	0.6917669	1.1065448	1.0443285
Phase-1 RCT-146	0.9013935	0.9678237	0.851819	0.907967	0.95854896	0.9741255	0.97389406	0.9556282	0.88946043	1.0923298	0.9932351	1.0318807	1.0243378
Superoxide dismutase Mn	1.2435799	1.3342232	1.3467083	1.4091574	1.118982	1.1828868	1.0303702	0.8534278	1.0475384	0.84432054	0.8337888	1.2042328	1.1872835
Phase-1 RCT-115	1.0519744	0.9821353	1.112015	1.075063	1.0747783	1.3871518	1.2711755	1.0045019	1.0314493	1.1318788	0.96017456	1.3004888	1.1532124
Alpha-1 microglobulin/bikunin precursor (Amp)	1.24618	0.980785	1.0475732	0.8366026	0.98878133	0.81698976	1.025451	1.1161635	1.0172861	0.5992527	0.60859494	0.75506683	0.9001037
Phase-1 RCT-18	0.90045977	1.0017488	1.0101657	0.9875216	0.90536875	1.0190951	1.0365213	1.0213221	0.9236123	0.9780891	0.9973572	0.9180121	0.864122
Maapin	1.0129534	1.1418403	0.9272678	0.98099013	1.0573543	0.84919596	0.93039036	1.2125725	0.84338323	1.2897073	1.0181806	1.095501	0.98074883
Decorin	1.0688914	1.1655521	1.3974947	1.1074705	1.2703669	1.0945175	0.9872753	1.1662391	0.9189278	1.281644	0.9572065	1.4720458	1.0651525
Retinoid X receptor alpha	1.2637656	1.3704399	0.97650635	1.0459572	1.2074845	0.7464412	0.71141108	0.86256434	1.0370606	1.2014333	1.0429698	1.2428078	0.9729519
Cellular nucleic acid binding protein (CNBP)	0.87954755	0.9361021	1.0493834	1.115395	0.8349503	0.9501398	0.8707108	0.8961017	0.9713539	0.8087085	0.67222655	0.8947188	0.91771066
NADPH cytochrome P450 oxidoreductase	1.3236212	1.3749297	1.1006472	1.0614828	1.2047869	1.0915987	0.8392803	0.8822643	1.1091412	0.9280861	1.1296392	1.2260785	1.0945491
Maltase enzyme	0.7105826	0.7424376	0.8098928	1.0353626	1.0365835	0.7685634	0.810519	0.8782684	0.7851629	1.0361178	0.8485974	1.19362	1.051407
Caspase 1	0.9288211	0.9594932	0.8876401	0.91078174	0.96311927	0.83438355	0.7222485	0.7866426	0.9150481	1.0415615	1.036109	1.0182394	0.91262378
Cystatin C	1.1224918	1.1194959	1.380179	1.0837369	0.86116455	1.2707493	1.2188628	1.7878616	0.8711461	1.065682	0.9412744	0.94073135	1.0226791
p53/CDC	0.8761545	1.021652	0.862381	0.8886666	0.9518141	1.2887709	0.8928361	0.7040952	0.94121045	1.0592881	0.9494147	1.0935701	1.0237708
Poly(ADP-ribose) polymerase	1.0168988	0.8603865	0.9283076	0.93310314	0.8862652	0.7781844	0.84595567	0.7581823	0.9386368	0.8551088	1.089433	1.0325987	0.951148
Tissue plasminogen activator	0.8035504	0.87592455	1.0098232	1.0170149	1.028418	1.2411344	1.153396	1.3871441	0.9714241	0.8347132	0.905597	0.95392755	0.9831984
Multidrug resistant protein-1	0.7809567	0.7355182	0.7809457	0.9580494	0.9530794	0.9202072	0.8103981	0.879083	1.089143	0.9468519	1.3978633	1.0009837	0.9791883
Phase-1 RCT-207	0.9956174	1.0950443	0.832087	1.1198542	0.87818147	0.8967421	0.8428883	0.85478115	1.0504447	0.96343255	0.81513846	1.1363107	0.9121688
Phase-1 RCT-181	1.1183282	0.9853407	1.0283253	0.9837835	0.9832819	0.749971975	1.0022587	0.8635287	1.332659	1.390284	1.046703	1.1267475	0.9948127
Gap junction membrane channel protein beta 1 (Gj01)	2.0363147	1.8287897	1.3185609	1.5151329	2.101717	1.4025865	1.4358855	1.2624285	1.2122568	3.3878813	1.4786648	1.3547849	1.0686563
Aqueporin-3 (AQP3)	0.9222493	0.98037523	1.0281225	0.9805326	0.9566083	0.95210004	1.0134764	1.0130141	0.9842802	0.9481025	0.9807515	0.9788304	0.94107753
Myelin basic protein	1.2456431	1.0288417	0.8662147	0.8622457	1.1520411	0.9524015	0.8968608	0.77050436	1.012413	1.195284	0.8877018	1.1428741	0.8862512
Calgranulin B3	0.94534663	0.9125257	0.87284064	0.93927265	0.83558315	0.9366865	0.89416518	0.87551146	1.0244302	0.92724884	0.8607983	0.9256769	0.9512628

Table 30

[illegible]

Table 30

Table 30. Expression Data for 72 Hour Timepoint													
(1)	Compound-Dose (2)	Animal Number (3)	Liver Toxicity Inflammation Classification (4)	Gene Name (5)	CPHOS 25	CYCA 20	CYCA 20	CYCA 20	CYCA 80	CYCA 80	CYCA 80	CYCA 80	CYCA 80
		2149	no										
	Phase-1 RCT-107	1.1292918	1.2788833	1.0549026	0.88051426	0.7745631	0.8700357	0.7180358	1.6642781	0.8850886	1.0904683	1.8452859	1.017812
	Beta-actin, sequence 2	0.95912504	2.0917316	2.4765564	1.7445312	1.4458791	0.38728206	0.6143303	1.2194172	1.5423823	1.8711014	3.0408347	1.2547774
	Proteinase 3	0.8573624	0.8131774	0.5755483	0.8527387	1.0411046	1.0241978	1.0286612	0.38556	1.0901912	0.9754208	1.0397089	0.8920989
	Cytochrome P450 2D18	1.0467342	1.1745288	1.0357163	1.1005872	1.0345984	0.9437716	1.2109227	1.1797054	1.3896873	1.167087	1.0238819	0.979142
	Cytochrome P450 2C11	1.306577	0.90301833	0.6865876	0.9789307	1.04435984	1.1863031	1.2080069	1.3862655	1.3862655	1.2747794	1.1837368	1.284478
	Phase-1 RCT-280	1.0913524	1.4556903	1.5006878	1.4837136	1.1815866	0.5071215	0.675233	1.2550104	1.4882594	1.8421942	2.542165	0.8601048
	Phase-1 RCT-280	1.0255775	0.65180054	0.7816084	0.8430046	0.8462514	0.9619854	0.62595273	1.1070546	1.0090164	1.466624	1.4272719	0.890931
	Beta-actin, sequence 2	0.9284483	0.9061514	1.104247	0.88615445	1.267698	1.3644415	1.149783	1.0069482	1.0477792	0.94352484	0.9691854	0.8871207
	Phase-1 RCT-292	0.9543782	0.84768714	0.8708078	0.9543222	0.8684958	0.9385645	1.0116643	0.8749887	0.768182	1.090395	1.0346555	1.0253346
	Gyrate kinase, muscle	0.8798138	1.0857897	0.97539716	1.2616954	0.8947152	1.3422297	1.154122	1.329256	0.84875034	1.238217	1.138004	1.0959594
	Osteocalcin	1.0740222	0.869871	0.864158	0.9918611	0.8853764	1.1373097	1.187761	0.8681322	1.1418818	1.168433	0.8926441	1.0287001
	Calreticulin B1	1.0272896	1.3868315	0.93983595	1.3432728	1.0266143	1.4185893	1.187761	0.9609213	1.0529991	1.0325742	1.1188119	1.05318
	Apolipoprotein AII	0.9684375	1.630234	1.2929526	1.4360538	1.208233	1.1436312	1.6144732	0.49113658	0.727478	0.7857571	0.41981148	0.8304111
	Phase-1 RCT-78	1.2281916	1.1302178	0.89736706	1.0053958	1.1058435	1.143522	1.2017082	1.291152	0.99975478	1.0506653	0.77431685	0.85584126
	Phase-1 RCT-109	0.9258926	1.2158387	1.1518881	1.1532438	1.2002877	1.4085066	1.1285555	1.0810713	1.005187	0.992394	1.0570978	0.9465994
	Glycine methyltransferase	1.4599318	1.357226	1.5469892	0.9010144	0.77543145	0.5486597	0.6512968	1.7141715	1.0052238	1.1235883	1.8821277	1.0131331
	Glycine-methyltransferase	1.0270665	1.5331869	1.2854848	1.0644956	0.887273	0.4414875	0.577084	1.0502738	0.8930921	0.8946046	0.8648169	1.1778311
	Phase-1 RCT-256	0.89068687	1.477024	1.5087241	1.175517	0.97128594	0.731083	0.90594685	0.9931114	1.0924357	1.1566502	1.0528427	1.0725857
	Carbonic anhydrase III	2.018163	0.66143453	0.6881112	1.1716741	0.4283322	0.30443278	0.54430294	0.99341524	0.59324897	0.5514183	0.25588482	0.7168127
	Phase-1 RCT-78	0.9054032	1.144422	1.0381567	1.0928943	0.8570016	0.94274217	0.85158193	0.838849	1.2335231	1.1528898	1.1179467	0.8782253
	Urinary protein 2 precursor	1.0928203	0.9544224	1.2333563	0.9308785	0.80156486	0.7156372	0.58515217	0.6549287	0.800565	0.8013049	0.51927808	0.8296688
	Inulin-like growth factor I	1.110507	1.0455871	1.523588	1.1217838	0.7659172	0.9400944	0.75546228	1.7141016	0.7802773	0.8881894	0.73003185	0.8963487
	Asyl sulfotransferase	1.1158746	1.3958911	1.2748202	0.7848816	0.78904664	0.4504286	0.766222	1.9703863	0.8182193	0.83287024	2.2339554	1.0480871
	Phase-1 RCT-185	1.1620264	1.0868282	1.393148	1.1743757	0.87871456	0.7895897	0.6917508	0.68381983	0.99588275	0.9278982	0.7509248	0.9032354
	Collin	0.9616403	1.0183903	0.84867043	1.143015	0.8164281	0.8268966	0.99891524	1.1241914	1.0590024	1.0057212	1.0235351	0.83604308
	Stat3	1.0344216	0.7232014	0.6512495	0.8213362	1.0233643	1.2221408	1.0955684	1.0461803	1.057627	1.0030435	0.89600285	0.89600285
	60S ribosomal protein L6	0.93184716	0.9593333	1.0840175	0.9278762	1.2178493	1.1989192	1.0970952	1.0975139	0.908617	0.801112	1.0884703	0.93526274
	Calpain I heavy chain	0.9659106	0.9420722	0.8040061	1.1129271	1.005458	1.2508636	1.1621914	1.0263818	1.2262381	1.2713894	1.1536795	1.089665
	Collagen type II	0.7070825	0.97475165	1.1707809	1.2648607	1.267839	1.292575	1.4138172	1.3099653	0.9814044	1.1687089	0.9738899	1.0804911
	Phase-1 RCT-179	0.8731843	0.79587343	1.0344538	1.0024524	1.0044488	1.1354861	0.82875156	0.9164758	0.9421474	0.958783	0.86597365	0.8498479
	Voltage-dependent anion channel 2 (Vdac2)	1.0022452	1.172515	1.1763374	1.1192122	1.2327982	1.090481	0.9222117	1.0473233	1.0470687	1.1357812	0.9902921	1.0548445
	Phase-1 RCT-192	1.0780498	1.0025298	0.9904022	0.984779	1.0606666	1.0427132	0.9462553	0.8946874	0.9956306	1.0146868	0.8854716	0.9729747
	Adenine nucleotide translocator 1	1.1587278	0.8392341	1.1152223	0.9800354	1.0734262	0.7602497	0.8901927	0.9747426	1.0569977	0.9053068	1.0871047	0.9553234
	Thymosin beta-10	0.8728415	1.10147	1.4052982	1.0154701	1.2575134	1.1844214	1.0508912	1.3050877	0.8097186	0.852462	1.7925421	0.9718541
	High affinity IgE receptor gamma chain	0.93614626	0.8656381	0.8138246	0.900005	1.0431533	1.2187135	0.9411922	1.0054327	1.053477	0.86075014	0.80553166	0.8612372
	(c-erbB2)												
	Gamma-actin, cytoplasmic	0.971497	0.95438474	1.0800418	0.9570841	1.1188185	1.0087211	0.9547386	1.0856205	0.9448284	0.9177748	0.8828877	0.95481473
	Uncoupling protein 2	0.8613807	0.7818076	1.0664377	1.0237813	1.2744315	1.451889	1.2299707	1.0899016	0.76387304	0.8754012	1.0988854	0.93016154
	Phase-1 RCT-34	1.082406	0.9764898	0.9050142	0.92537147	1.3215144	1.2018881	1.1247215	0.814364	1.0277298	0.8765328	0.8641479	1.0182736
	Phase-1 RCT-31	0.97783855	1.138078	1.2294436	0.9420427	1.0614245	0.7013858	0.7128689	1.0888175	1.2424988	1.1808805	1.6342143	1.2007282
	Cyclin D1	1.4580588	0.87149153	0.6370017	0.9652214	1.3900472	0.907176	0.98123825	0.85788497	0.7522711	0.7401671	1.0217454	0.99299485
	IgE binding protein	0.898968	1.0249548	0.809337	0.9690469	1.0058296	1.3736777	0.9135652	1.0961411	0.9631889	1.0052382	1.0393801	0.8916637
	Zinc finger protein	1.0913563	0.8482025	0.8435675	0.8352406	0.88714504	0.9247244	0.84984785	0.9722855	1.0348603	1.0027237	0.92689436	0.93510765
	Phase-1 RCT-138	0.9085556	0.9874259	0.8910898	0.92437683	1.0114503	1.184448	1.0218063	0.8608743	0.9797315	0.81915596	0.9394665	0.9819252
	Alpha-tubulin	1.328019	0.69071827	1.0392317	0.9815702	1.2151084	0.9829787	0.8883693	1.028225	0.85870083	0.82721	1.2569701	0.9313134
	Alpha-prothymosin	0.8037432	1.0820533	1.196727	0.868437	1.1662757	0.8248833	0.7781785	1.2206089	1.182549	1.1869184	1.2513101	1.125395
	Calpain 2	0.94494516	0.8866584	0.7580785	1.0116698	0.96425515	1.0484521	1.0274218	1.1811855	1.0828478	1.0818881	1.2752059	1.0300834
	Phase-1 RCT-12	1.0064231	0.9844428	0.8707415	1.1358476	1.0055768	1.0480716	0.9357342	1.1752588	0.8553873	0.8760886	1.258688	0.9895623
	Cathepsin B	0.8533288	1.2210221	1.281804	1.0895563	1.0121789	1.1365121	1.129652	0.97591406	1.0458687	0.97949	1.025897	1.0828252
	Phase-1 RCT-24	1.2692897	0.8441142	0.8007281	1.1313798	1.2823185	1.0934281	1.0175707	1.3064494	0.97153115	0.9508553	1.4172765	0.89309105
	Melanoma-associated antigen ME491	0.8513714	0.8381214	0.75007546	1.089553	0.91743124	0.9168849	0.9997288	0.9026284	1.1281337	1.042141	1.0566873	0.85922734

Table 30

Phase-1 RCT-68	1.0156757	1.0680336	0.8948832	1.0196609	0.8715596	1.0134613	0.8710235	1.0470867	1.3278276	1.1830001	1.227586	1.0449538	1.0870974
Cyclin G	1.1060651	0.89971274	0.8430885	1.0963372	0.96330265	1.0865531	1.1550485	1.0840551	1.659453	1.1310518	1.1912861	1.257426	1.2287412
Hypoxanthine-guanine phosphoribosyltransferase	1.0773463	1.0449746	1.3378214	1.2211837	1.2606891	0.822448	1.0284543	1.2066903	0.9485482	1.0078133	1.3325127	0.91602635	0.95722276
Tissue inhibitor of metalloproteinases-1	1.018447	1.0979167	1.010369	1.0804334	1.2453914	1.3392295	1.1421157	1.1728779	1.1018192	1.1728346	1.0846041	1.0104572	1.0856451
IL-1	1.3193542	0.8875812	1.0890583	1.0564907	1.0868117	1.080347	0.9654851	0.8270808	0.9811285	0.97694286	1.0157462	1.0157462	0.9444869
Ribosomal protein S9	1.1624703	0.98141515	1.0280808	1.0536163	0.9780087	1.0866118	1.0812928	0.897828	0.9015868	0.9403741	1.016157	0.86572003	0.8444869
Heme oxygenase	0.88018817	1.0948458	1.2845437	1.0805423	1.1430335	1.9947127	1.1638529	0.7487025	1.0395959	0.8094142	1.0310824	1.2104739	1.3497748
Ribosomal protein S8	0.8825959	1.1456728	1.315077	1.0083742	0.9684804	1.0890369	0.8176376	0.7852554	0.9040638	0.9089149	1.1514633	0.87113893	0.9208201
Ribosomal protein S17	1.1192235	0.9958784	1.1306316	0.8374724	0.8872283	1.0195711	0.7829655	0.8821167	1.0080154	1.0240529	1.1324502	0.8665768	0.8923112
Nucleoside diphosphate kinase beta form	1.212573	1.1888274	1.2065467	1.1322062	1.2694265	1.0795428	0.9782524	1.0142729	1.0003064	1.1544688	1.1175275	1.00183	1.0749851
Phase-1 RCT-121	0.9305875	0.8716245	0.7378192	0.9220102	1.0875999	1.0572119	0.8677448	1.0510038	0.8964883	0.864018	0.9207063	0.9029181	0.89284303
14-3-3 zeta	1.0093946	0.8631851	0.78934836	1.0484487	1.2461547	1.091617	1.09235	1.0334224	1.0543782	0.9404366	1.0484194	1.0651486	1.1293201
60S ribosomal protein L6 (alternate clone 1)	0.8697322	1.215544	1.3048295	1.0805689	1.1568438	1.2227398	0.93934214	1.3305948	1.0252354	1.0467294	1.5726544	0.9921544	1.0438359
Beta-tubulin, class I	1.22554	0.9271002	0.8024876	1.1768804	1.0840712	0.8472833	0.7209862	1.1507015	0.862208	0.8776367	1.5563313	0.8803783	0.90513545
Organic cation transporter 3	0.95618956	0.7662027	0.8640565	0.9413177	1.2875036	1.2486745	0.9269719	0.9700344	0.8517104	0.88489497	1.1052897	0.86014928	0.8084478
Beta-actin	1.1514144	0.8571841	1.0549438	0.89692354	0.9976949	1.1260333	0.8791766	1.3548365	0.8713178	0.8649273	0.980727	1.053862	0.980727
Cathepsin S	1.0051111	1.1107189	0.7670533	0.8894539	1.0458715	1.5310528	1.141958	0.7020339	0.7821873	0.78803456	0.78451656	0.7615979	0.8903437
Bilirubin reductase	1.0037645	1.0003603	0.8620805	1.0336281	1.1076303	1.1471076	1.1112258	1.3207167	1.107384	2.2456748	1.0223019	1.111059	1.155549
Phase-1 RCT-154	0.9949173	0.8734494	0.5713893	1.0326418	1.0825689	1.0178943	1.0355182	0.736246	1.027508	1.0624081	1.0380309	1.0440187	0.824767
Phase-1 RCT-293	0.91421854	0.8194093	0.8116044	0.8998101	1.0475559	1.2823626	1.2086923	0.7504254	1.027835	0.9081689	0.74827915	0.961259	0.9734273
Anneirin V	1.0701453	0.8820123	0.84534186	1.031034	0.8638359	0.8928965	1.1249338	0.93527573	0.91837454	0.9631725	0.9389845	0.91760457	1.0809528
Complement factor I (CFI)	0.9125908	1.3519135	1.3253628	1.0084432	1.1382799	1.5161462	1.1155517	0.7988991	1.053763	0.89177954	0.93233865	0.92345124	1.0680728
Phase-1 RCT-276	1.1143248	1.1285628	1.0717785	0.9242676	1.0987214	0.8127123	0.7619068	1.1928617	1.1332765	0.91067535	1.3548548	0.91159	0.8779928
Tyrosine aminotransferase	0.871251	1.2717332	1.1313412	1.0522158	0.8879897	0.605521	0.8424976	0.74819513	1.0764493	1.1875338	0.7350773	0.7899496	0.8904016
Glutathione peroxidase	0.83448275	1.1657331	1.2956789	1.1316427	1.0027109	0.95585378	1.169736	0.5748718	1.0694077	0.89524475	0.5760178	1.0052976	1.108901
Histidine-rich glycoprotein	0.8159991	0.8281776	1.5905781	0.7770817	0.6126571	0.7688738	0.60941039	1.9585618	0.844841	1.1642865	0.8899132	0.83442056	1.1259401
Carbonic anhydrase III, sequence 2	0.7685332	0.8248482	1.0125692	0.728494	0.60597277	0.75789914	0.62621339	1.1574067	0.88443315	1.1208654	0.8478032	0.77029574	1.081102
Phase-1 RCT-92	0.8684479	0.9713552	1.1423397	0.8649471	0.80031824	0.69414586	0.7027069	1.7946904	0.9841425	1.0814937	1.186625	0.97888637	1.06108
Transitional endoplasmic reticulum ATPase	0.9980205	0.7359584	0.958183	0.9798616	0.91941696	0.8053101	0.8656795	1.0197238	0.9874161	0.89914485	0.8905508	1.021182	1.0685848
Phase-1 RCT-88	0.82412806	0.80915743	1.4116589	0.78851854	0.6773909	0.80174804	0.7575995	1.9175085	0.8817508	1.36716	0.8988997	0.82388176	1.0685848
Phase-1 RCT-296	1.0415963	1.3423188	1.029016	0.80465	0.9561637	1.1063147	1.2643765	0.5098774	1.144042	0.98703386	0.3655208	0.8891394	0.8905132
Phase-1 RCT-161	1.604114	0.7459004	0.87106305	0.77686785	0.8880734	0.82739235	0.68216356	0.7442029	1.0231028	1.0540721	0.7784036	0.8756756	1.021647
Glutathione S-transferase theta-1	1.1374291	1.0194448	1.287849	1.3138528	1.1410908	0.88080275	1.148066	0.8885713	0.9801583	0.98012923	0.9290785	0.9908105	1.0586234
Phase-1 RCT-168	1.0171533	1.018506	0.8726044	1.1750945	1.2606905	1.1084851	1.1714007	1.0055602	1.0708591	0.984038	0.92543	0.83064724	0.9732185
Phase-1 RCT-182	0.9181954	1.074648	0.7265748	0.938085	0.8138862	0.9091943	0.8386184	0.95551234	0.9638428	0.9198988	1.0043747	0.891586	1.008597
JNK1 stress activated protein kinase	1.0829595	1.290233	1.2216708	0.9178333	0.8552684	0.51815395	0.86903548	1.9482772	0.8303059	0.83797846	2.2034755	1.1260844	0.888862
Phase-1 RCT-41	0.8949954	1.0374745	0.999448	1.0707848	0.86331187	0.88841987	0.8698365	0.87847806	1.0480994	0.9340932	0.99323008	0.94493484	1.0537953
Phase-1 RCT-33	0.78480794	1.3823089	1.0233452	1.3413688	1.3698186	1.3924003	1.1888304	1.1978105	1.0885994	1.0196495	1.0478895	0.89305344	1.0277511
Phase-1 RCT-178	1.0773036	0.74884795	0.8324997	1.0512848	0.66607106	0.69604845	0.7859582	1.0232288	1.0105608	0.9548036	0.8911283	0.99430384	1.1727065
Apolipoprotein CIII	1.0153701	0.725827	1.2029722	1.2505208	1.0782365	0.7853958	0.88036376	1.0357048	0.9312711	1.0372055	1.0454813	0.886011	0.9478464
Phase-1 RCT-68	0.969441	0.0781463	0.889088	1.0413497	0.8002448	0.8093842	0.8243842	1.7798776	1.193153	1.2049389	1.2678548	1.0495706	1.0185495
NADH-cytochrome b5 reductase	0.75539184	1.8027588	1.2886368	1.2594978	0.97045153	0.933639	1.1104571	0.5825534	1.0443331	1.127175	0.76423407	1.0806225	1.0267262
Alpha 1 - inhibitor III	0.96339164	1.0670396	0.8580184	1.246686	1.0401813	0.7430727	0.872081	1.2288344	1.2063017	1.0068839	1.0578855	0.88192863	1.0939907
Paraoxonase 1	1.1638866	1.0827893	1.1573358	0.8559121	0.73305297	0.768317	0.82056034	0.60178885	0.78911506	0.7616931	0.60662327	0.8613967	0.85296007
Presentin-1	0.94507855	1.1165687	1.0307845	1.2780199	0.8606848	1.1310015	0.96784025	0.44512348	1.0180442	0.9884043	0.4831508	0.7001473	1.1434069
Apolipoprotein C1	0.8307741	1.0105821	0.88814305	0.8573749	0.8767185	0.86186005	0.70984286	0.8883939	1.0883608	1.0103782	0.6851555	0.8698788	1.0197501
Cytochrome P450 2C23	0.88309167	1.2303436	1.0905607	0.8877144	0.923413	0.79185708	0.8902027	0.9046573	0.8930964	0.8382943	0.3326177	0.88770425	0.93078
Phase-1 RCT-227	0.92993563	1.0482994	1.0667882	1.0427155	0.69707173	0.81480545	0.7082246	0.9308652	1.3250047	1.2162271	1.1662309	0.9487746	1.0611815
Hepatic lipase	0.71882596	1.072234	1.1745728	1.0522323	0.9599953	0.7248185	0.88817465	0.7059669	0.8327682	0.9337078	0.94054204	0.8239625	0.89303556
Phase-1 RCT-164	1.0173072	0.7083401	0.88818914	0.8641743	1.1343135	0.9683131	0.89569535	0.78978455	0.85971888	0.7256435	0.94943138	0.80814537	0.80814537
Multidrug resistant protein-2	1.100803	1.1465071	1.1847309	1.0720819	1.0207699	1.3565736	1.1471981	1.3725097	1.0546981	1.1356161	1.1907235	1.2142371	1.1345975
Insulin-like growth factor 1 exon 6	0.7053228	1.350137	1.1882974	1.4938877	0.89071825	1.1524089	1.016287	0.85263538	0.75008905	0.8497729	0.6310384	1.0581223	0.8365642
N-hydroxy-2-acetylaminofluorene sulfotransferase (S1C1)	1.0822658	0.906577	1.5283059	1.25766	0.7484678	0.7986894	0.7476674	0.4999706	0.76897	0.8285823	0.4888163	0.62139003	0.8365642
Dynamin-1 (D100)	0.9337162	1.039085	0.970882	0.8092102	0.76287067	0.84281	1.0707159	1.073571	1.0940012	0.890818	1.0014137	1.0026884	1.0026884
DNA polymerase beta	1.191474	0.95528907	1.0081071	1.0328065	0.8486627	0.78804665	0.75221044	0.95627883	1.0021293	0.8771471	1.0021293	0.8771471	1.0026884

Table 30

Phase-1 RCT-173	1.0552132	0.6118008	0.70622275	0.86114717	1.1721451	0.84817266	0.96364664	1.0311908	1.1186227	1.1465967	1.3401563	1.0833035	1.0138404
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.0792493	0.9655548	1.3145353	1.1129712	1.0816532	1.0739564	0.93413216	0.9279984	0.89125127	0.86055875	1.0887081	0.899923	0.8533623
Ribosomal protein L13A	0.9578014	1.355566	1.3284154	1.1681536	1.322888	1.5191462	1.1070937	1.1658009	0.87843055	1.0357401	0.873524	1.0512401	0.979046
Phase-1 RCT-144	0.8982378	0.8137931	0.96148655	0.91273098	1.0006048	0.94939538	1.027901	1.0255183	0.9255678	0.9634768	0.8978191	0.9537398	0.9859854
C-H-ras	0.99869916	1.1157527	1.04816742	1.0427095	1.0428811	1.3799739	1.1550258	0.87255406	0.90051778	0.8665086	0.8680759	0.9287081	1.0103093
Vascular noncatalytic transporter (VNAAT)	1.031778	0.95898484	1.1245509	1.0713649	1.1013277	1.0804332	1.1273782	0.79252388	1.088735	1.0717688	0.9107034	1.0325968	1.2489508
Phase-1 RCT-273	1.0043788	0.7310044	0.79845534	0.82138294	0.8910449	1.13814	1.0711095	0.9713084	1.0145825	0.8437431	0.9873578	1.164382	1.1164382
Phase-1 RCT-230	0.91276747	0.7029139	0.62931544	0.8071657	0.9087213	1.2658104	1.0886387	0.8334081	1.020163	1.0030453	1.009585	1.1922922	0.986957
Phase-1 RCT-174	0.98806293	0.8988937	0.6427733	0.8812444	0.7958821	1.0012679	1.1749539	1.1001395	1.063454	1.0893201	1.0752841	1.0673481	0.9782071
Phase-1 RCT-40	1.0053026	0.7305506	0.68013924	0.7999262	0.81983215	1.3017298	1.0224246	0.8108212	0.96465707	1.0490593	0.8900452	1.1776105	0.8821417
Phase-1 RCT-158	1.0033777	0.6626698	0.6430023	0.8697749	0.875436	0.8643414	1.083888	0.98339105	0.9845522	0.9705071	0.98449016	0.9848132	0.9848132
Deoxycholate kinase	0.9347988	0.8323244	0.8711167	0.8112581	0.825245	1.117828	1.181223	0.79273015	1.0901653	0.980591	0.8609382	1.012331	1.047818
Inositol polyphosphate multikinase (Ipmtk)	1.0395348	0.7907472	0.7417109	0.935920234	0.8211553	1.273741	0.9434568	0.8180267	1.0030338	0.9159857	1.0030338	1.005662	0.93920606
Neuronal cell adhesion molecule (NCAM)	0.9628853	0.8940955	0.8900258	0.8288868	0.8590126	1.4370474	1.1303206	1.2070001	1.0128479	0.928008	1.091932	1.186981	1.085957
Hepatocyte growth factor receptor	1.0311103	1.0176553	0.9810606	0.8621641	0.82488874	1.0040605	0.8256459	0.8160277	0.9507742	0.957807	0.68801834	1.0270528	1.0068178
Empty	1.0052345	0.62332084	0.4594121	0.6925226	0.73755646	0.9945525	1.0865888	0.85293638	1.0181768	1.0362802	0.88041475	1.026806	0.92423266
Dopamine receptor D2	1.0715158	1.1804308	1.4754933	1.0543497	1.0871975	0.85407877	1.0307853	1.2843703	0.905013	0.8932786	1.5753419	1.0723441	1.1469903
Phase-1 RCT-51	0.8808265	0.8712714	0.7227955	0.83584195	0.8261996	0.9497265	0.988849	1.0401777	0.9203301	0.8553702	1.0706378	0.9636605	0.92760068
Four repeat ion channel	0.9877892	0.9250318	0.8023777	0.94458464	0.9325537	1.0914093	0.9526897	0.7685605	0.9422477	0.7042514	0.8511699	1.0263788	1.0160378
Adrenomedullin	1.0277559	0.88088488	0.6131656	0.7364663	0.8707393	1.141374	1.1320628	0.7285608	0.950401	0.89038125	0.84923285	1.142948	1.0518132
Caveolin-3	0.94577956	0.8990455	0.71381485	0.94676536	0.780808	1.0730811	0.8776155	1.0042694	0.924542	0.9602416	1.047789	1.0946397	1.068842
Phase-1 RCT-129	0.99839735	0.82700696	0.80390097	0.884042	0.8009804	1.1386045	1.0491875	0.8808556	1	0.9594316	1.017189	1.070114	0.9648435
Phase-1 RCT-94	1.0462282	0.78390807	0.6754559	0.8474203	0.8556353	0.9381205	1.0438473	0.95255656	1.0288855	1.0245498	0.8541473	1.0807109	1.0052443
Sarcoplasmic reticulum calcium ATPase	1.1790305	0.82228124	0.85085034	0.87612677	0.8820975	0.8895815	1.029168	1.2205182	0.8602676	1.0331179	0.9828774	1.0400127	1.0085683
Phase-1 RCT-79	1.0115548	0.8545509	1.0179892	0.81317705	0.95435566	1.1039613	0.9883693	1.0371883	1.0393306	1.0307539	1.073142	1.223328	1.0500311
Phase-1 RCT-262	0.9887215	1.5802623	1.5207569	1.0215506	1.0712731	0.8846161	0.7827395	1.573232	0.9980765	0.9633724	1.8443883	1.040942	1.1650585
Phase-1 RCT-151	0.9578004	0.8742768	1.0171868	1.0439231	0.9530538	0.8846161	0.9459972	1.1684842	1.0128349	1.0595235	0.8494703	1.012866	0.9592851
Phase-1 RCT-70	1.1285393	1.1582797	0.92905575	1.0735998	0.88643694	1.0013683	1.6541489	1.2163665	1.0119009	1.0694383	1.0418432	0.94258645	0.9896736
Phase-1 RCT-150	1.089886	0.6824075	0.6256947	1.00378	1.2033245	0.9256057	1.1589172	1.0924673	1.016006	1.126511	1.018327	1.1464034	1.0319891
25-hydroxyvitamin D3-1 alpha-hydroxylase	0.9186593	0.8639051	0.60270464	0.84069537	0.91743124	0.9352877	1.1661712	1.0924673	1.0863819	0.93576205	1.018327	1.0168014	1.0304319
Phase-1 RCT-119	0.8945183	1.1509684	1.0376158	0.92433675	0.94892085	0.76120317	0.8326823	1.722683	0.9174447	0.9274074	1.687461	1.0151501	1.1418205
Peroxisomal 3-oxoacyl-CoA thiolase 2	1.027597	1.195168	1.2719388	1.4588041	1.3968863	1.2833775	1.0844903	1.1144482	1.108989	1.214488	1.235887	1.03023	1.114609
Phase-1 RCT-146	0.988758	0.7160228	0.56343085	0.80872214	0.99352546	1.09657795	1.1321168	0.96842244	1.1122983	1.008534	0.9149602	1.100153	1.0484133
Superoxide dismutase Mn	1.0397356	1.2440203	1.1485552	1.158105	1.1786753	1.2372295	1.0310848	1.2144487	1.0841191	1.2748638	1.17659	1.0935622	1.1280687
Phase-1 RCT-115	1.0857573	0.8788273	0.7931718	1.0008773	1.0016844	1.3165356	1.2835406	0.8904852	0.9844727	1.0042285	0.8471323	1.006463	0.980607
Alpha-1 microglobulin/bikunin precursor (Ambp)	0.886622	1.1228434	1.3022813	1.0783532	0.958855	0.873772	0.785792	0.8863753	1.0284667	0.83713224	0.85456034	0.89012223	1.00206
Phase-1 RCT-18	0.9027972	0.87617004	0.72912294	0.9109848	0.89550734	1.2709784	0.90365105	1.0524883	0.88780345	0.9591509	1.0556915	0.98641248	1.0011444
Maapin	1.149484	0.8145124	0.79766786	0.82510055	0.88523863	1.165852	1.0860697	0.70421904	0.91588135	0.832753	0.88923384	0.9115193	0.9309708
Decorin	0.8841205	0.70045378	0.57717556	0.73012924	0.9108954	1.167587	1.2682568	0.8698452	1.0842326	0.8022826	1.0876392	1.3591276	1.0928298
Retinoid X receptor alpha	1.0511999	0.92436373	0.8774513	0.978855	0.89045209	0.9388883	1.3550889	1.2674531	1.328133	1.328133	1.1569464	1.1477528	1.2824607
Cellular nucleic acid binding protein (CNBP)	0.8892137	1.0491688	0.8088917	1.0509377	1.1475881	1.0090241	1.0382689	1.2391814	0.98438466	1.0348396	1.2509111	1.0199172	0.97973283
NADPH cytochrome P450 oxidoreductase	1.2450786	1.0817676	1.0241426	1.1602698	0.8333098	1.0015423	1.041032	1.9332035	1.4855864	1.3014262	1.4614782	1.197595	1.700171
Malic enzyme	0.8533807	1.008457	0.64839288	1.1331443	1.043208	0.8425674	1.1357837	0.7297758	0.9081613	0.8055069	0.762576	1.0845846	1.2889344
Caspase 1	1.0017105	0.64137938	0.9177921	0.91747208	1.0058931	1.0592046	1.1571911	1.0323927	0.9778879	0.8996603	1.0959877	1.131387	1.079373
Cyaldin C	0.9771081	0.9601106	0.9498863	0.788917	0.88453406	0.8876974	0.7316357	1.0777305	0.9245112	0.8228437	0.8848664	0.83535183	0.8788825
P5CDCC	1.0450071	1.052323	1.0092947	1.2670685	0.8050028	0.9174748	1.2282223	0.7555667	1.0527911	1.0878633	1.0188903	1.0608078	1.1495955
Poly(ADP-ribose) polymerase	1.0048382	0.8388988	0.8770874	1.100284	1.1133993	0.94470507	1.0389085	1.1786635	1.0000179	1.0382776	1.2817653	0.95625128	0.96910626
Tissue plasminogen activator	0.820228	0.86766034	0.7834409	0.8610802	1.1113993	1.0097779	0.7997082	1.6838435	1.16404	1.8477398	1.0354437	1.0102112	0.9475227
Multidrug resistant protein-1	1.1057808	1.3041042	1.1868733	1.2965263	1.1113993	1.0097779	1.0894159	1.8653944	1.3259294	1.3118038	1.257452	1.4359819	1.3870382
Phase-1 RCT-207	0.97832257	0.5904763	0.6707066	0.90019853	1.0414084	1.28880057	0.8904528	1.038498	0.975465	1.1291574	1.1841198	1.0577494	1.0088662
Phase-1 RCT-181	1.0812089	0.90784615	0.8289695	1.0235031	0.9100326	0.93158886	1.0500054	1.4644052	1.082462	1.082462	0.9901527	0.93511455	0.9738823
Gap junction membrane channel protein beta 1 (Gjb1)	1.4209006	1.43095058	1.2693366	1.203281	1.0465205	1.1838021	1.5648888	1.2093308	0.969555	1.036753	0.9564044	0.94608465	1.0485897
Aquaporin-3 (AQP3)	1.0309283	0.84474355	0.66270624	0.927202	0.8128711	0.85629563	0.9512687	0.94420743	1.2830746	1.12413	1.1251386	1.0184328	1.0527695
Myelin basic protein	0.76294047	0.94189384	1.2036563	1.0180515	1.0681826	0.9306982	0.9567157	0.8535871	0.8050382	0.8523881	0.8477428	0.8477428	0.93037426
Calgranulin B3	0.8784131	0.67728076	0.8031378	0.98903443	1.0235936	0.9045925	0.9689179	1.0743072	1.0722929	1.1077468	1.1081023	1.0427551	1.0292861

Table 30

Phase-1 RCT-156	1.0602802	1.1461048	1.3577694	1.2326924	1.0604557	1.0469296	0.8932748	1.0348014	1.0763147	0.9753848	0.9278439	0.81130688	1.0056305
Protease inhibitor 28 alpha	1.0842074	1.1028472	0.98874835	0.9866231	0.7876244	1.1209308	1.0841687	0.7272079	1.1476877	1.0082513	0.8609258	1.1255566	1.1285703
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes-near, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint

Table 30. Expression Data for 72 Hour Timepoint																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Compound-Dose (2)		Animal Number (3)		Liver Toxicity Inflammation Classification (4)		Gene Name (5)		DIF 100		DIF 100		DIF 25		DIF 25		DIF 25		DIF 25		DIF 25		DOX 12		DOX 12		ERY 160		ERY 160		ERY 160		ERY 40		ERY 40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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1	1.4735761	1.0075403	0.99149185	0.97323596	1.1315227	1.2842816	0.712891	0.80087525	1.1586772	0.15175846	0.1673832	0.1740284	0.8178533	1.0387816	1.1711787	0.93948893	1.4889206	1.2767898	1.0300382	0.56091845	2.3424537	3.284088	1.5359154	0.18409509	0.9387612	0.9592851	0.8592866	0.73881769	1.0218015	0.92738652	1.0464454	0.90633702	0.5901841	0.98803407	1.032314	1.2451614	1.0375701	0.9838679	1.2124425	1.1441338	0.94101808	1.1789813	0.9270866	1.2570394	0.9145631	0.92038303	0.739427135	0.95185077	1.1685528	0.9652528	1.23890816	0.9675527	0.9590408	0.9888285	1.0240912	0.833657844	1.23974017	1.2398948	1.1358894	1.1458894	1.0710657	0.54863145	1.06534831	2.029281	2.480437	1.4803143	1.1869328	1.2974338	1.3424787	1.0089696	0.94630865	0.88276774	1.1458894	0.918951896	0.7104565	1.681481	1.4620899	1.0318598	1.104682	1.0416565	2.3442922	1.0360639	1.153502	1.2812263	0.78698737	1.2241491	1.0241783	0.92713639	0.97374639	0.782026	0.90354989	1.6589369	1.055908	1.0430074	0.9587884	1.05622372	1.2343435	1.0557808	1.680816	1.535658	1.3102185	0.9287624	1.133934	0.78493228	0.91546296	0.98021173	0.7184586	1.0058698	0.91347875	1.1154538	0.95872627	1.680816	1.535658	1.3102185	0.9287624	1.133934	0.78493228	0.91546296	0.82576555	0.8609575	0.8807131	0.73919594	0.8508943	0.9160016	1.3905805	1.4771852	1.1846884	1.7906019	1.3378301	2.128592	0.84348438	1.9483172	1.1647887	1.3385851	1.2187951	1.1433561	1.5612688	1.0478692	1.4475284	1.0034856	0.75494738	0.888741	1.080639	1.10506	0.93909606	0.8335483	1.4983052	1.714554	0.9008338	0.8352155	1.1588737	0.848633	1.1482091	1.3458789	0.6562766	0.846271	1.3404187	1.1619472	1.2584703	1.277373	1.558861	1.0293323	1.0690728	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.94587631	1.050332	0.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Phase-1 RCT-68	1.0733877	1.1247232	1.2180428	1.0274911	1.0298733	1.1829813	1.088592	1.1477123	1.0007375	0.8887373	0.9081954	0.9644307	1.0135814
Cyclin G	0.8149769	1.0916588	1.0577798	1.0627398	1.10502	1.1258192	2.2751116	2.1543946	1.026325	0.9581546	0.97052157	0.98722484	1.0233696
Hypoxanthine-guanine phosphoribosyltransferase	1.0055595	1.2431145	1.0045193	0.9801889	1.0062984	1.1204743	0.84111888	0.8401588	0.42788319	0.5840439	0.26889338	0.6890942	0.8591382
Tissue inhibitor of metalloproteinases-1	0.8872122	0.9620084	0.9481076	0.9524473	0.8972375	1.0510727	1.2522575	1.2632272	1.5881018	1.4862188	1.688433	1.4123386	1.3860283
ID-1	0.9514886	0.9854987	0.94759283	1.3488108	0.9597707	1.0517309	1.0450521	1.7645521	0.9949503	0.8823071	0.8108667	0.8644031	0.83391434
Ribosomal protein S9	0.8403275	0.9812945	0.86739437	0.962283	1.0143688	1.0319083	1.1237584	1.0595903	0.93758	1.2659887	0.97924066	1.0527427	1.0527427
Heme oxygenase	1.0112836	1.2160974	1.0824288	0.9250774	1.0467008	1.0365957	1.3472687	1.3533842	1.5287172	1.353594	1.2488883	1.1877031	1.1877031
Ribosomal protein S8	0.9056741	0.9947605	1.0050572	0.7718033	1.0899737	0.9841762	1.260551	1.354396	2.3672738	1.881327	1.9100397	1.6027735	2.0555481
Ribosomal protein S17	1.1567799	1.1021272	1.0716875	0.73355	1.1973872	0.95460083	1.1738933	1.217705	1.5201687	1.7475882	1.3758485	1.3758485	1.3758485
Nucleoside diphosphate kinase beta isoform	0.9431689	1.2036537	1.2661082	1.0630787	1.0543342	1.2017149	1.2548708	1.1288644	2.8837784	1.927335	1.658292	1.0807771	1.2025845
Phase-1 RCT-121	0.91700464	0.8567328	0.90330825	1.0039723	0.8621856	0.7802649	1.0124553	0.79054534	0.64416707	0.7810929	0.5481627	0.61198986	0.604617
14-3-3 zeta	0.970657	1.0479724	0.98878183	1.1384587	1.0842174	1.0845398	1.1294505	1.1600542	0.675027	0.73980784	0.6376297	0.73980784	0.73980784
60S ribosomal protein L8 (alternative clone 1)	0.9789016	1.0856812	1.0229818	0.8948374	1.0366748	1.00738415	1.2118943	1.1679688	1.5932895	1.5849108	1.7281845	1.3823849	1.3823849
Beta-tubulin, class I	1.124271	1.2748728	1.057928	0.9600973	1.1472835	1.3523692	0.888743	0.8277706	1.0521299	0.8478207	0.8178373	0.8378166	1.0113204
Organic cation transporter 3	0.90513295	0.98655874	0.9222284	1.1371609	0.9422608	1.0125045	0.7888651	0.7767342	0.5900502	0.5154892	0.4382724	0.572638	0.8942112
Beta-actin	0.8148535	0.80920464	0.8222284	1.1371609	0.9422608	1.0125045	0.7888651	0.7767342	0.5900502	0.5154892	0.4382724	0.572638	0.8942112
Cathepsin S	1.0817892	0.95844114	1.1216512	0.85041836	1.183737	0.86143614	1.4111843	1.1557224	1.8395905	1.4638822	1.5978567	1.2370715	1.4700941
Biliverdin reductase	1.2522286	1.8178645	1.5595368	1.343723	1.286358	1.445571	1.037098	0.86146814	0.91268873	0.80953074	0.802802	0.6881417	0.87020785
Phase-1 RCT-154	1.0598009	1.0486887	1.2767032	1.020063	1.3082018	1.0372426	1.3080621	1.4243027	1.0017782	1.0443688	0.8671868	1.041192	1.0838377
Phase-1 RCT-293	1.1424673	0.9768903	1.0513705	0.86394527	0.97406805	1.1005922	1.7123023	1.4897474	2.0358284	1.50768	1.5778884	1.7012645	1.5405062
Adrenin V	1.1658885	1.0738853	1.2149216	1.0365531	1.4713033	1.104015	1.0785352	0.84505075	1.032243	1.4242548	1.2257704	0.89394356	0.8338028
Complement factor I (CFI)	1.2741333	1.1442022	1.13363	1.0480551	1.1989015	1.0670688	2.059184	1.6608943	1.4240215	1.1704278	2.102724	1.3001426	0.85738343
Phase-1 RCT-276	1.085486	1.2185404	1.1364913	0.9403848	1.088015	1.0702893	0.78930884	0.8187484	0.8187484	0.8187484	0.8187484	0.8187484	0.8187484
Tyrosine aminotransferase	0.8080855	0.9688792	1.0080508	0.7857274	0.93031245	1.0702893	0.78930884	0.8187484	0.8187484	0.8187484	0.8187484	0.8187484	0.8187484
Glutathione peroxidase	0.928477	0.7964015	1.2408594	0.9925157	1.2358407	1.0478541	0.63249934	0.5745975	1.6184528	1.9474727	1.785726	1.6889192	1.785726
Histidine-rich glycoprotein	1.5604036	0.9584803	1.1985851	0.9637657	0.9971838	0.7499688	0.78791344	0.7718758	1.0912781	1.5944985	1.4553174	1.6188726	1.5838941
Carbonic anhydrase III, sequence 2	1.5493838	0.9745181	1.2970294	0.99150956	0.9577802	0.75935615	0.7351659	0.62259594	0.94198004	1.3635281	1.24108	1.4481087	1.6380167
Phase-1 RCT-92	1.5289287	0.98340225	1.256884	0.8603306	0.976803	0.76222503	0.665042	0.63598833	1.0770453	1.3470328	0.36314978	1.4417188	1.5094412
Transitional endoplasmic reticulum ATPase	0.97898078	1.026888	0.94722974	1.2303447	0.9720552	1.1889459	0.80474766	0.737032	0.7408332	0.7510586	0.8845741	0.7820754	0.62073185
Phase-1 RCT-68	1.5287104	0.9562888	1.2103308	1.044061	0.9588689	0.89424623	0.85419184	0.86518013	1.0655032	1.4037435	1.3634124	1.5664403	1.3574852
Phase-1 RCT-161	1.1728938	0.9323848	1.2252274	0.9418161	1.0652532	0.89989566	0.88949585	1.0501125	0.91763868	0.75688667	0.80484855	0.7081729	0.85300656
Glutathione S-transferase theta-1	1.057622	0.9452495	0.8897358	0.986938	0.98570085	1.230608	0.88949585	1.0501125	0.91763868	0.75688667	0.80484855	0.7081729	0.85300656
Phase-1 RCT-168	0.8698184	0.88145983	0.9189781	0.7854495	0.9714393	1.0449287	0.7928948	0.6492104	0.6840228	0.9184123	0.8703334	0.8285537	1.0754044
Phase-1 RCT-182	1.060982	1.1275443	1.2134961	1.0651596	1.1450061	0.98286146	1.0657907	1.151922	1.2268781	1.6871008	1.2371038	1.1824371	1.5599313
Alpha 1 - inhibitor III	1.500924	1.0319716	1.2134961	1.0651596	1.1450061	0.98286146	1.0657907	1.151922	1.2268781	1.6871008	1.2371038	1.1824371	1.5599313
JNK1 stress activated protein kinase	0.81911504	0.80438143	0.7580049	0.8138664	0.83546877	0.85403085	1.473723	1.4773842	1.2649729	1.3372634	1.5757575	1.3753843	1.9881849
Phase-1 RCT-61	1.2548835	1.2211881	1.3015895	1.028234	1.1672418	1.0734495	1.0200853	0.9719168	0.9474717	0.9932416	1.4390533	1.1517357	0.7825283
Phase-1 RCT-33	0.852085	0.880244	0.83589095	0.9723309	0.94724977	1.0335478	0.75306955	0.7784027	1.9686188	2.0105865	1.4192468	2.0870068	2.8304034
Phase-1 RCT-178	1.170049	0.7818943	0.90418607	1.3111142	1.0994558	1.3384464	0.78056257	0.8946451	0.6738197	0.8331698	0.5055557	0.7225511	0.9301174
Apolipoprotein CIII	1.119457	1.0550059	0.9743004	1.0380588	0.8392062	1.0380588	0.82035404	0.8392318	0.62886745	0.97396886	0.9489717	1.0044744	0.8434455
Phase-1 RCT-86	1.650281	1.418087	1.2916908	1.5768043	1.1471956	0.9721188	0.72110783	0.88815956	0.9637602	1.143131	1.0453062	0.9680816	0.9680816
NADH-cytochrome b5 reductase	1.1265686	1.2660639	1.1210843	1.248196	1.2658382	1.0807288	0.7027632	0.5933143	0.8439543	1.0128685	1.0599461	1.0772288	1.0252224
Alpha 1 - inhibitor III	1.4800443	0.93272836	1.0913492	0.8101105	0.9765982	0.8104477	0.29446733	0.27552816	1.1705521	1.552342	1.5078271	1.5872284	1.0048092
Phase-1 RCT-233	1.854387	1.2333016	1.1610808	0.83075845	1.072438	1.1347391	0.8549606	0.8998533	1.1425129	1.1628905	2.086178	1.064868	0.79288178
Paraoxonase 1	0.8562416	0.7633408	0.9506854	0.6476971	0.99219838	0.8543833	0.55206524	0.5864778	1.1449146	1.1628905	2.086178	1.064868	0.79288178
Preseitin-1	1.4842103	0.87424004	1.089955	0.83143487	1.1203228	0.6226333	0.28868996	0.27322698	1.1765184	1.6732337	1.8200772	1.4383278	1.0271826
Apolipoprotein C1	1.0560472	1.0754135	0.7547453	0.7848338	1.1778928	1.1015818	0.6868503	0.5800274	0.82709223	1.0211885	1.268938	1.2281835	1.1987651
Cytochrome P450 2C23	1.2234246	1.0918918	1.1271523	0.88135024	0.983789	0.8615899	0.89076126	0.7508113	1.111095	1.305496	0.7714883	1.8157617	1.267201
Phase-1 RCT-227	1.0614043	1.0832553	1.0302552	0.79232043	0.89563254	0.9708971	0.868321	0.9003928	1.2014492	0.8636281	1.2844088	1.3546549	0.9859897
Hepatic lipase	0.8384678	0.9064035	0.9022887	1.0051288	1.0286874	0.9708971	0.868321	0.9003928	1.2014492	0.8636281	1.2844088	1.3546549	0.9859897
Phase-1 RCT-184	0.9781451	0.9359526	0.9022887	1.0051288	1.0286874	0.9708971	0.868321	0.9003928	1.2014492	0.8636281	1.2844088	1.3546549	0.9859897
Multidrug resistant protein-2	1.0686144	1.0286874	1.0051288	1.0051288	1.0286874	0.9708971	0.868321	0.9003928	1.2014492	0.8636281	1.2844088	1.3546549	0.9859897
Insulin-like growth factor I, exon 6	0.6883735	0.635076	0.6711259	0.7383164	0.7807326	0.55951434	0.6887304	0.51211244	2.3924188	1.6843566	1.2290379	1.7878871	2.0814765
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	0.8941402	1.0240856	0.8254803	0.7345083	0.8933316	0.8061073	0.4686131	0.5107769	1.4302275	1.0084444	1.5106228	1.0890022	1.1318861
Dynamin 1 (D100)	1.0184603	0.9589382	0.94838325	0.843387	0.90725213	0.8655567	0.8493886	1.062881	1.9973688	1.9360586	1.5303355	1.8607369	2.0465214
DNA polymerase beta	0.7899798	0.9428255	0.9928215	0.7780294	1.0684428	0.92508817	0.85123587	0.8151513	0.92058374	0.92058374	0.92058374	0.92058374	0.92058374

Table 30

Phase-1 RCT-173	0.812585	0.8278547	0.82927075	1.0392314	0.93812854	1.0144305	0.9463901	0.8621078	0.820755	0.8461554	0.51802236	0.6137975	0.8823456
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.9146979	1.0526028	0.91471154	0.81591195	1.0105104	0.96143526	0.99708074	0.9748122	0.9618935	1.017154	1.317445	1.0642821	1.070513
Ribosomal protein L13A	0.86126775	0.7850265	0.83181685	0.8292339	0.7193449	0.84005255	1.4847099	1.4037677	1.6827603	1.8797423	1.5175807	1.5738642	0.72729455
Phase-1 RCT-144	1.1519938	1.1044135	1.0688371	1.041633	1.149675	1.0478411	0.9388064	0.876556	0.89493185	0.83413345	0.8712885	0.7811875	0.8011875
c-H-ras	0.9381188	0.964245	1.0505742	0.705163	1.0134837	1.0122149	1.6854476	1.427371	1.9808769	0.9138685	1.0487771	0.8514824	1.0855764
Vesicular monoamine transporter (VMAT)	0.9638277	0.8787711	1.0276828	0.8555585	1.0265312	1.0115812	0.8510533	1.0421567	0.8223548	0.7212011	0.9984203	0.7420354	0.8117371
Phase-1 RCT-273	0.8801205	0.90162575	1.0276828	1.1940291	1.0059872	0.8874924	0.8724292	1.7168267	0.8962488	0.79254913	0.8804583	0.75388473	0.9084107
Phase-1 RCT-230	0.88002205	0.8699032	0.7682685	1.0705598	0.8885826	0.8618669	0.8566887	1.8206348	0.8593948	0.8484848	0.7298543	0.76858198	0.8182019
Phase-1 RCT-74	1.0124781	1.13033	0.8339263	1.0811688	0.88896334	1.203563	1.0515837	1.0513883	0.8162273	0.84097046	0.8600001	0.820339	0.76858198
Phase-1 RCT-40	0.82581186	0.8108018	0.83215225	1.0797622	0.8856372	0.8724003	0.8479522	1.0345407	0.6336173	0.7585761	0.68120563	0.7886215	0.76858198
Deoxycholine kinase	0.9078247	0.91620517	0.8293157	1.2283118	0.81344017	0.86175677	1.13313	0.9830144	0.8018559	0.74704707	0.6515838	0.71164463	0.6907463
Insitol polyphosphate multikinase (IPMK)	0.84430075	0.85078025	0.75140023	1.3750744	1.0537841	0.9153471	1.1750084	1.8880757	0.72916375	0.71338887	0.8093024	1.0876343	0.878941
Neuronal cell adhesion molecule (NCAM)	1.478389	1.2081728	1.1490754	1.4887547	1.203594	1.2158471	0.9398905	2.3693337	0.87540555	0.6091507	0.729078	0.5963548	0.7118187
Hepatocyte growth factor receptor	1.1682226	0.9820895	1.1797844	1.317914	0.981653	0.8449288	1.6442393	1.4165339	0.87500256	0.867773	0.85950416	0.7068474	0.89773554
Empty	0.9447047	1.041947	1.0894853	1.0572693	1.1758055	0.8758439	0.8875933	1.70721	0.53913724	0.6185738	0.77304	0.4794847	0.5870314
Dopamine receptor D2	0.885953	1.1006462	0.9087109	1.0690476	0.8105143	0.8735074	1.0228119	1.3695761	0.9040893	0.8918783	1.343483	0.90205246	0.87728107
Phase-1 RCT-51	0.9231809	0.91588594	0.8252718	1.0690476	0.8105143	0.8735074	1.0228119	1.3695761	0.9040893	0.8918783	1.343483	0.90205246	0.87728107
Four repeat ion channel	0.8680751	0.8624242	0.804108	0.80141407	1.0384849	0.8503352	1.1464484	0.97274745	1.2138072	1.002594	1.0284574	1.0538374	1.184436
Adrenomedullin	0.8923671	0.8688532	0.9693194	1.008608	1.1183133	0.83587125	0.91665466	2.1768997	0.5748221	0.5265624	0.7252807	0.54020315	0.85654074
Caveolin-3	0.88733023	0.97433305	0.847235	0.89471277	0.9791808	0.96037685	1.052907	1.1968978	0.91076535	0.7535196	0.83024055	0.8903015	0.85654074
Phase-1 RCT-129	0.9017038	0.9010787	0.8314144	1.0771275	0.84350845	0.96430645	1.052907	1.1968978	0.91076535	0.7535196	0.83024055	0.8903015	0.85654074
Phase-1 RCT-94	0.9865418	1.0854278	1.309082	1.1631288	1.2839031	0.95259744	1.0897533	1.0592841	0.9041638	0.8212854	0.88975814	0.77162157	0.8884922
Sarcoplasmic reticulum calcium ATPase	1.1271882	1.0830753	0.9268712	1.1268269	0.9933144	1.1671538	1.0568709	2.0725005	0.9108198	0.8174633	0.8212854	0.88975814	0.77162157
Phase-1 RCT-170	1.0040638	1.4494768	0.8933271	1.2768141	1.1268593	1.243032	1.147418	0.857663	0.9716913	1.0942417	0.8540289	0.9141843	0.9373773
Phase-1 RCT-150	1.0763744	1.2583311	1.5231162	1.6118698	1.5281135	1.0405053	1.2407305	1.0855761	0.94968134	0.63956374	0.5948903	0.7306366	0.87922704
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.020128	1.1042868	0.98846815	1.3178119	0.87801325	0.88455628	0.9803926	1.0131778	0.5602355	0.74072618	0.840481	0.5817499	0.54076916
Phase-1 RCT-119	0.8687175	0.7600515	0.8055584	0.8590325	0.9278497	0.83149066	0.7618175	1.2176012	1.5126884	1.3630714	1.0648053	1.2344266	1.4027688
Peridomol 3-keapoyl-CoA thiolase 2	0.9883217	1.0676154	0.8189898	1.4943572	0.8094707	1.425779	1.2512703	1.1289383	0.75543305	0.8038182	0.5865184	0.7045792	1.1355587
Phase-1 RCT-146	0.9142813	1.062461	1.0579285	1.2343382	1.2217887	1.0031877	1.0407086	0.9009168	0.9494533	0.85741854	0.7677939	0.6504979	0.8689551
Superoxide dismutase Mn	0.9278915	0.97576583	0.9605449	0.9710254	0.84291835	0.98123528	1.0734	1.2001358	1.8701694	1.5813742	1.5806687	1.5598222	1.8348927
Phase-1 RCT-115	1.20339	1.2358374	1.0939741	1.4701862	1.0248107	1.0581414	1.3072075	1.5801891	0.50981125	0.5031327	0.45276597	0.47814838	0.6829703
Alpha-1 microglobulin/bikunin precursor (Ambp)	1.2685648	1.2126223	1.3008173	0.923935	1.1542581	0.958146	1.0351863	0.91710603	0.8772971	0.8527208	1.5145804	1.1600231	0.7863584
Phase-1 RCT-18	1.0314785	1.1017404	0.98665123	0.9447369	1.0768946	0.9871405	0.7785218	0.78315824	1.0337275	0.83647704	0.9188765	0.9853316	0.9866203
Masspin	0.888702	0.8647002	0.875827	0.8688908	1.0457843	0.82352077	1.0162582	1.7607828	0.7104825	0.81517038	0.7682543	0.7508351	0.7975866
Decorin	0.882854	0.84877974	0.7445444	1.2510978	0.8528213	1.0843178	1.0884422	3.3317288	0.9703878	0.70833063	0.8586828	0.7028874	0.82855235
Retinoid X receptor alpha	0.8577282	1.1592744	1.1344659	1.0807979	0.933587	1.0920752	1.3408824	0.9788596	0.71217084	0.8033805	0.8417671	0.878866	0.72512174
Cellular nuclear acid binding protein (CNBP)	0.8077784	0.8427888	0.86275844	0.5949486	0.7760497	0.85422805	0.9354788	0.87622854	1.7864739	1.4123272	1.1087689	1.3311784	1.5828806
NADPH cytochrome P450 oxidoreductase	1.4075465	1.4865165	1.4537616	2.2285554	1.3159152	1.4959964	1.5558021	1.3290731	0.97319204	1.0235246	1.0499107	0.974135	1.0871881
Malic enzyme	0.8160743	0.8692066	0.86432525	0.8118914	0.90050346	1.146344	0.98683174	0.6840319	0.9004252	1.0639608	1.0588808	0.7415478	1.1433388
Caspase 1	0.948838	0.9375326	0.8897301	1.1882844	0.8284173	0.8357408	0.98683174	0.7662376	0.53500785	0.7228845	0.8333334	0.84215228	0.805841
Cystatin C	0.974733	0.9412973	1.0809817	0.98055424	1.0492852	0.8627404	0.72416276	0.8517085	1.7253051	1.916018	1.5475	1.6805317	1.5770854
p53COC	1.3405198	0.85771515	1.0946665	1.0658807	0.9900763	0.8692483	2.4584807	6.683583	0.7700139	0.7952437	1.4627888	0.5657392	0.8666197
Poly(ADP-ribose) polymerase	1.0385504	1.2084321	1.0491458	1.0884954	0.9385983	1.0784954	0.8588876	0.78314473	0.7682885	0.92813675	0.6722808	0.85924345	1.0418109
Tissue plasminogen activator	0.93991315	1.1014608	1.166815	0.96186216	0.98118605	0.8445485	1.126551	0.67073745	1.750767	0.9425674	1.0916819	1.0143509	1.1210393
Multidrug resistant protein-1	1.5589208	1.4011728	1.2439513	1.530157	1.242927	1.6336164	2.988836	2.4482975	1.0648037	1.037828	1.0892708	0.8766576	1.0413111
Phase-1 RCT-207	0.9748009	0.9584449	0.9073527	1.2988082	0.9484148	0.86022891	1.8594643	1.2125599	0.53776803	0.79425245	0.585082	0.73818123	0.7628108
Phase-1 RCT-181	1.2789565	1.0353284	1.1638631	1.038162	1.1387185	0.8207281	1.116778	1.0027748	1.0008867	1.1090819	1.0328502	1.1720582	0.7425604
Gap Junction membrane channel protein beta 1 (Gjb1)	1.0182687	1.0899754	0.91009736	2.0220501	0.82578917	1.1605505	1.4808717	0.8345137	0.9122487	1.3053175	0.96975857	1.0173904	1.0592984
Aquaporin-3 (AQP3)	0.89651895	1.1353222	1.0030883	1.1751471	1.033078	1.0603076	0.87069863	0.9364509	0.8768141	0.8034213	0.80235934	0.92458975	0.88765705
Myelin basic protein	0.783179	0.8124343	0.75855168	0.7580022	0.766022	0.7676007	1.076885	0.8704337	0.8706905	1.0316701	0.831438	1.0534205	1.304501
Calgranulin B3	0.89838074	0.8304098	0.8607222	1.2234988	0.9884873	0.85757893	1.1809894	0.9839936	0.6553537	0.7838958	0.6918587	0.7784919	0.9132763

Table 30

Phase-1 RCT-158	1.0077113	1.0581586	1.1224232	0.9769208	1.1128731	0.99504628	0.84835406	0.8127188	0.95245844	0.9267378	1.0501037	0.94409128	0.93876247
Protease activator 28 alpha	0.97322047	1.0787289	0.98551494	0.93385943	1.0867007	1.1784227	0.88745457	0.90040344	0.84534093	0.7969485	1.1410321	0.84517556	0.68873108
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 hr: yes-necr, necrosis observed; yes-tox, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 28)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint (1)

Compound-Dose (2)	ERY 40	EST 0.1	EST 0.1	EST 0.1	EST 0.4	EST 0.4	EST 0.4	EST 0.4	ETH 2500	ETH 2500	ETH 2500	GAN 200	GAN 200	GAN 200	GAN 200
Animal Number (3)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Phase-1 RCT-107	0.7827825	0.7569441	0.9090909	1.1717374	0.80546936	1.0633711	0.903572	1.0041511	0.91653336	1.4259111	1.1734747	1.0761231	1.0298804	1.0298804	1.0298804
Betaine homocysteine methyltransferase (BHMT)	2.1532802	0.8192176	1.3127484	1.0847023	0.8464675	1.0102073	0.903572	1.0041511	0.91653336	1.4259111	1.1734747	1.0761231	1.0298804	1.0298804	1.0298804
Proliferating cell nuclear antigen gene	1.0484169	1.1093945	1.038547	0.7253835	0.7864113	0.7829193	0.8605058	1.0297182	0.9227515	1.1707598	1.7302885	1.2089885	1.6656614	1.6656614	1.6656614
Cytochrome P450 2D18	0.8853369	1.0085328	1.040596	0.9524487	0.8797972	1.0160868	1.0404055	0.7308573	0.67097384	0.87413803	0.9324529	0.8937328	0.8264161	0.8264161	0.8264161
Cytochrome P450 2C11	1.4160868	0.96823846	1.0786527	0.82789454	0.8506785	1.6300285	1.6300285	1.1833812	0.2363384	0.7373692	0.8951202	0.82625687	0.82625687	0.82625687	0.82625687
Phase-1 RCT-280	1.6829447	0.74434006	1.1756842	1.0180892	0.96184045	0.80154294	1.21554464	1.0213488	0.8882815	1.1433301	1.4524055	1.1000973	1.3958678	1.3958678	1.3958678
Phase-1 RCT-58	1.253828	1.0278928	0.95710927	1.1632587	1.2538404	1.3548173	0.7125297	0.86051633	0.8682815	1.1433301	1.4524055	1.1000973	1.3958678	1.3958678	1.3958678
Beta-actin, sequence 2	0.78325105	1.1985767	0.767114	1.1308184	1.0731472	1.0888105	1.1564051	0.8457083	0.1055978	0.80442366	0.8461785	0.9089748	0.8207881	0.8207881	0.8207881
Phase-1 RCT-292	1.0218195	0.9282005	0.87178046	0.92432014	1.2387084	1.0524098	1.1727129	1.0378415	1.0548585	0.9954079	1.2079895	1.1585839	1.1014278	1.1014278	1.1014278
Pyruvate kinase, muscle	1.6923868	1.3028886	1.0272776	1.2180995	1.3259518	1.1174128	1.4389525	0.80046004	0.9867295	0.8660413	1.067847	1.0937978	1.009556	1.009556	1.009556
Osteocalcin	1.8128481	0.9257874	0.8534144	0.8583181	1.2349023	1.421413	1.4089732	0.1037364	0.84508787	1.1327726	1.1810812	1.0218638	1.1284256	1.1284256	1.1284256
Angiotensinogen AI	0.81878704	1.2570814	1.9218868	1.5032048	1.0243795	1.4723485	1.3778899	0.00861905	0.73608877	1.2430545	1.2097145	1.075308	1.0344442	1.0344442	1.0344442
Comed-32	1.110998	0.7455575	1.234188	1.2491748	0.92488368	1.232805	1.3480124	0.9089534	0.871289	0.8680813	1.0496388	1.168054	1.0577997	1.0577997	1.0577997
Phase-1 RCT-108	1.5187172	1.5474713	1.3319337	1.38078	1.4821088	1.2829512	1.3680053	0.92710037	0.3111602	0.92849834	1.1411185	1.034442	1.0764173	1.0764173	1.0764173
Glycine methyltransferase	0.8228823	0.8252266	1.3130387	1.483147	0.86822304	1.1531491	1.1786005	0.88398355	0.8484772	1.5014504	1.5420008	1.6283125	1.7007111	1.7007111	1.7007111
L-lysine-gamma-lactone oxidase	1.4857541	0.9027937	1.2708408	1.243152	1.0161808	1.0834557	1.4148024	0.99173504	0.7203053	0.80044436	1.4694178	1.6283125	1.7007111	1.7007111	1.7007111
Phase-1 RCT-268	2.3681433	1.1028638	1.3933961	1.3220552	1.1600228	1.1931341	1.3187829	0.97820885	1.1011399	0.7854795	1.2543028	1.158794	1.1862442	1.1862442	1.1862442
Carbonic anhydrase III	1.1375683	1.184421	0.84963877	1.7928071	0.6477801	1.7187983	0.8549454	0.7725188	0.24887458	0.9827136	0.8116531	1.4207538	1.0139689	1.0139689	1.0139689
Phase-1 RCT-78	1.2494638	1.0022836	1.0385377	1.1237543	1.0074555	1.023473	0.9491165	0.8764101	0.8928608	0.9787365	1.0730961	1.010598	1.0139689	1.0139689	1.0139689
Ureaprotein 2 precursor	2.074275	1.3770641	1.3011901	1.3365568	1.6292716	1.4290957	1.3852338	0.8644434	0.81351058	0.80311954	1.1604108	1.0866831	0.862553	0.862553	0.862553
Insulin-like growth factor 1	2.182228	1.0343962	1.513879	1.3080506	1.2386285	1.2277681	1.5732984	0.8894011	0.8043357	0.61334074	1.0695242	1.0900186	0.8621049	0.8621049	0.8621049
AVI sulfotransferase	1.8165121	1.3533875	1.2045827	1.1883697	1.4425388	1.1950152	1.288108	1.2256448	0.9659808	1.2284427	1.1247298	1.0467607	1.1416517	1.1416517	1.1416517
Phase-1 RCT-185	0.89107317	1.3899351	1.7471421	1.2004087	1.4856883	1.3371185	1.2317812	0.9436714	0.86112523	0.99075174	1.1126398	1.1224586	1.0738855	1.0738855	1.0738855
Collin	1.0971475	1.6553347	1.4116416	1.3882216	1.1873811	1.2281255	1.50278055	0.846602	1.080122	0.8042778	1.01354	1.0486004	0.90358956	0.90358956	0.90358956
Statmin	0.7041455	0.82232543	0.81748724	0.7248855	0.8194228	0.75692018	1.62730635	1.1454337	0.98833946	1.2155915	0.97070096	0.959928	0.9157771	0.9157771	0.9157771
6S ribosomal protein L8	0.7669652	1.3805608	0.99228674	1.185912	1.1807148	1.3128433	1.0231853	0.84446725	0.90393219	0.84447637	1.0784466	1.3120664	1.2498583	1.2498583	1.2498583
Calpain heavy chain	0.8283257	0.9375908	0.880964	0.8018713	1.1343472	1.1673856	1.0913088	1.0536325	0.99798313	1.0141378	1.120906	1.0281618	0.855558	0.855558	0.855558
Collagen type II	0.57524014	0.8895812	1.0807682	0.8649145	0.7639762	1.0137368	0.81716007	1.5271381	2.292845	1.2513628	0.88903167	0.8927872	0.87415418	0.87415418	0.87415418
Phase-1 RCT-178	0.6453576	1.2012448	1.0577221	1.1328889	0.99000408	1.1454169	1.1209916	0.8158905	0.94151324	0.87058616	0.98073786	0.98737365	0.9826973	0.9826973	0.9826973
Voltage-dependent anion channel 2 (Viac2)	1.2289724	1.2704895	1.1392405	1.1143041	1.0784836	0.9381141	0.9489888	1.0628861	1.0915786	1.0591547	1.3098403	1.1887378	1.1928786	1.1928786	1.1928786
Phase-1 RCT-182	1.0902771	1.3901187	1.0078938	1.247026	1.517279	1.2718655	1.3458884	0.8588728	1.008868	0.9559	0.8385478	1.0118838	1.0085004	1.0085004	1.0085004
Adenosine nucleotide translocator 1	0.5970422	1.0655949	1.146133	1.24088	0.5910414	0.9102788	0.847212	0.8577268	1.0543376	0.8578113	0.8342212	0.9128272	0.7878216	0.7878216	0.7878216
Thymosin beta-10	1.1870034	1.6849355	1.5188892	1.2637242	1.5081294	1.4769572	1.2359888	1.1416487	1.0842501	1.1469731	0.9392046	0.9832789	0.9688596	0.9688596	0.9688596
High affinity IgE receptor gamma chain (FcERgamma)	1.0802021	1.3028888	1.114354	0.9924608	1.5275712	1.2528139	1.0665242	0.98519725	1.16802	0.93759404	0.87459236	0.9445157	0.95028293	0.95028293	0.95028293
Gamma-actin, cytoplasmic	0.9145621	1.287369	1.1161395	0.7670647	1.1789485	0.8908025	1.1409789	0.8717728	0.8455072	0.8520885	0.9530774	1.05954	0.81910398	0.81910398	0.81910398
Uncoupling protein 2	0.81102175	1.2120478	1.0491355	0.94610983	0.80451477	0.81654415	0.78906425	1.2184545	1.1085014	1.2501686	0.63176125	0.7880354	0.8173721	0.8173721	0.8173721
Phase-1 RCT-34	1.0051239	0.9163097	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835	0.8274835
Phase-1 RCT-31	1.1483824	1.2291764	0.9818208	1.1078528	0.7467911	1.1580005	0.93933505	0.87123297	0.92840874	0.8397351	1.4610835	1.2762622	1.4268907	1.4268907	1.4268907
Cyclin D1	1.4768822	1.0421905	1.1401958	1.5442854	1.7053354	0.9049702	1.5030682	0.87393555	0.85556483	1.2888974	0.74413574	0.8010049	0.73305535	0.73305535	0.73305535
IgE binding protein	1.1908931	1.1617382	0.9267734	0.79528478	0.94818586	0.938811	0.8635204	0.94770044	1.024802	0.8363578	1.2377677	1.1097786	1.0258174	1.0258174	1.0258174
Phase-1 RCT-138	0.65479815	0.9190987	0.9359543	1.1089083	0.60149163	0.6654311	0.72550408	0.81310207	1.0821114	0.7725077	0.9284788	0.8715312	0.97270405	0.97270405	0.97270405
Zinc finger protein	1.328382	1.1232783	1.0904814	1.0458016	1.1776315	1.0163714	1.1597891	0.8926767	1.0945846	0.9313339	1.2178202	1.1751383	1.062157	1.062157	1.062157
Alpha-tubulin	0.7913014	1.0787734	1.0880238	1.0823755	1.000373	1.1894689	0.8342411	0.9572169	1.128374	0.88506556	0.7378989	0.9085934	0.75133384	0.75133384	0.75133384
Alpha-prothymosin	1.1810888	1.2788495	1.1897491	1.1402865	0.894944	1.1447789	1.1313958	0.73858526	0.95304114	0.83331986	0.97255817	1.0016067	0.8859322	0.8859322	0.8859322
Calpain 2	1.0558162	1.0319394	0.9080908	0.9058917	1.0353334	0.8022051	0.77195483	0.8677981	0.9714133	0.88339218	1.0068299	0.98718417	1.0121409	1.0121409	1.0121409
Phase-1 RCT-12	0.74330014	0.7298668	0.89718	0.83551933	0.8374827	0.8241765	0.8252884	0.8679741	0.8714133	0.88339218	1.0068299	0.98718417	1.0121409	1.0121409	1.0121409
Cathepsin B	1.8200223	1.4004478	1.6570256	1.1180382	1.4786229	0.8374827	1.1361836	0.8679741	0.8714133	0.88339218	1.0068299	0.98718417	1.0121409	1.0121409	1.0121409
Phase-1 RCT-24	0.6620824	1.0362825	1.1052652	0.9317824	1.1035722	0.87751845	1.0593903	0.83247974	1.2132878	1.002968	0.9832659	0.9328807	1.0168542	1.0168542	1.0168542
Melanoma-associated antigen ME401	1.1087545	1.028949	0.8884646	0.78098285	1.2236555	1.0477746	1.1468814	1.458356	1.0684133	1.1439472	0.9578408	0.97435256	0.8493532	0.8493532	0.8493532

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Phase-1 RCT-68	0.9458378	0.8880238	0.8518746	0.8755123	0.9003824	0.9617082	1.0382708	0.9321827	0.9253349	0.8746613	0.9426587	0.9281483	0.9915881
Cyclin G	0.96829706	0.8567171	0.8448502	0.78641626	0.73667556	0.6820087	0.6007189	1.4303159	0.9770284	1.3000686	0.95713484	1.0432289	0.97293142
Hypoxanthine-quinine phosphoribosyltransferase	0.3900977	0.9861875	1.233082	1.0028898	0.9737112	0.88747584	0.944659	0.9359564	1.704164	0.6071071	0.86063586	0.9160625	0.90077144
Tissue inhibitor of metalloproteinases-1	1.5001429	1.2321726	1.0628011	0.9754052	0.82824217	0.80567884	0.9877188	1.5298103	1.1764287	1.76585	0.9185304	0.9316917	0.97741973
10-1	0.65814453	0.9480329	0.8481482	0.8881462	0.8975947	0.8528868	0.75100625	1.0786	0.9769489	1.1903024	0.86646813	0.9468579	0.8579732
Ribosomal protein S9	1.0238551	1.6689213	1.23373	1.0630959	1.2335374	1.6967162	1.3010887	1.052258	1.0877643	1.056663	0.8455143	0.90137196	0.87131125
Heme oxygenase	2.2281592	0.69736826	0.9228379	0.7479414	0.8862444	0.8458195	1.0598931	1.0598931	1.265072	1.2650563	1.270329	1.0740331	1.2197115
Ribosomal protein S8	2.0284964	1.7117964	1.5111094	1.3435903	1.5718602	1.445578	1.2278337	0.83651084	0.9083278	0.88161874	1.4656074	1.3369387	1.2824403
Ribosomal protein S17	1.4631987	1.6819938	1.4334086	1.2677587	1.3359878	1.3400728	1.3259101	0.9071208	1.0533144	1.1	1.4580019	1.2188142	1.2211833
Nucleoside diphosphate kinase beta isoform	1.1355151	1.4654111	1.252334	1.3596554	1.2705928	1.0685962	1.0045414	0.9711704	0.98908377	1.1486458	1.0075041	1.0217357	1.0217357
Phase-1 RCT-121	0.8377482	0.85279673	0.8368421	0.8285904	0.8994574	0.8122291	0.74904287	0.9692938	0.9692938	0.8713313	0.8968859	0.8743404	0.8743404
14-3-3 zeta	0.8178148	0.70120748	0.8241465	0.774097	0.5608786	0.61694115	0.7109007	1.570292	0.95398936	1.3249217	0.9713333	0.96507674	1.22656049
60S ribosomal protein L6 (alternative clone 1)	1.3384824	1.3337609	1.2111825	1.1840348	1.3582498	1.030918	0.9788765	1.0383725	1.0988436	1.3470136	1.2537518	1.22656049	1.22656049
Beta-tubulin, class I	0.198057	0.5588883	0.9814347	0.8066638	0.9723835	0.8673164	0.827899	0.83611166	0.8580033	0.8446971	1.3251086	1.1295447	1.0764815
Organic cation transporter 3	0.7651198	1.4627844	1.3235891	0.9662889	0.71216255	0.8043568	0.94174184	0.9861273	0.95756996	0.937331	1.0384182	1.0147867	1.0147867
Beta-actin	0.4876743	0.8557474	0.867344	0.814839	0.9694947	0.7114602	0.81091168	0.7843312	0.83759737	0.6349749	0.7209308	0.91003454	0.88423194
Cathepsin S	1.9400831	1.579867	1.2292077	1.1632874	1.3343829	1.0128634	1.4510384	1.31053	1.3005396	1.358884	0.93359313	0.98133927	0.8984011
Bilirubin reductase	0.7821151	1.2256324	0.9708348	0.8318418	0.7742173	0.81204784	0.84133195	1.2445578	1.0698495	1.8752804	0.9842948	0.8767032	0.86766565
Phase-1 RCT-154	0.89297205	1.0425779	0.9197151	0.9425587	0.83185186	0.8871394	0.7487509	1.0680965	1.0321089	1.2174611	1.0106484	1.0264482	1.0248507
Phase-1 RCT-293	1.5330056	1.2358888	1.3467244	1.1907624	1.1550003	1.0603774	1.1440916	0.90008134	1.1645647	1.0231245	0.9935381	1.0135551	0.94683744
Annexin V	1.1057111	1.052187	1.03291	1.0852834	0.7133434	0.79383063	0.9342983	1.3053382	1.0256587	1.2780578	1.0080688	1.2371365	1.0565313
Complement factor I (CFI)	1.3931801	1.5478943	1.5933722	1.5200914	1.2247812	1.3291827	1.4897048	0.84697328	1.2516158	1.062841	1.7705014	1.4460529	1.4803673
Phase-1 RCT-278	1.1812967	1.5104955	1.4916678	1.6052052	1.6052052	1.4228991	1.379702	0.8841541	1.0461347	0.94693478	1.1024446	1.0402639	1.0328573
Tyrosine aminotransferase	3.0465877	0.9810102	1.0795824	1.3204392	1.3845819	1.2590626	1.6405487	0.98007035	1.2981789	0.90484115	1.1306385	1.1623887	1.0795487
Glutathione peroxidase	1.5065345	1.5140142	2.1390871	1.6371989	2.1070135	1.7919245	1.7861765	0.79842836	1.000283	1.000283	1.4474722	1.2722449	1.186291
Histidine-rich glycoprotein	1.2975485	1.4963002	1.8453025	0.88752975	1.2948905	1.2670792	1.32733	0.9627156	0.83244807	0.6678947	1.418287	1.0592165	1.2308201
Carbonic anhydrase III, sequence 2	1.596783	1.4559048	1.7602714	0.87966245	1.3578987	1.2680913	1.2650026	0.8781563	0.8780227	0.63956443	1.1284397	0.9819387	1.1155457
Phase-1 RCT-92	1.266551	1.3303661	1.5162907	1.01461	1.3946245	1.3093198	1.2633063	0.92339253	0.7240213	1.0112191	0.9859877	1.0528975	1.0528975
Transitional endoplasmic reticulum ATPase	0.7804446	1.0200297	1.0982597	1.0913838	0.97786484	1.1317588	0.9433568	0.971384354	1.0311681	0.8652543	0.9026248	0.83465894	0.83465894
Phase-1 RCT-81	1.2071859	1.3413856	1.299723	0.91099554	1.2344376	1.2340607	0.6958777	0.89974584	0.74029728	1.0746083	0.9398978	0.9785214	0.9785214
Phase-1 RCT-296	1.5203586	0.98110324	1.5702956	1.2300481	1.2475758	1.160845	1.3390323	0.9837997	1.1454816	1.3234136	1.2841877	1.1623887	1.0795487
Phase-1 RCT-161	0.8708163	0.723827	0.6509017	0.8447104	0.8715758	1.0601778	0.9279328	0.9266508	0.7142787	0.96114236	0.8977461	1.1464821	1.2714072
Glutathione S-transferase theta-1	0.89759415	1.4352432	1.2442105	1.1178258	0.85387474	1.44454	1.1718204	0.93352785	1.018243	1.0250423	0.8688393	0.9016296	1.0151753
Phase-1 RCT-188	1.4879311	1.127907	1.2960291	1.378234	1.3066133	1.1139244	1.1290573	0.9733828	1.207205	0.8525183	0.8408984	1.0964678	0.9064215
Phase-1 RCT-182	0.9869007	1.121218	1.432172	1.1944475	1.166028	1.0325768	1.0218598	0.91018945	0.9586831	0.8976686	1.0234781	1.0933303	1.0184599
JNK1 stress activated protein kinase	1.7443573	1.3314325	1.095219	1.0335959	0.89375234	0.7203483	0.60468373	1.3208303	1.0320483	0.91265595	0.95905817	0.9500609	0.9592344
Phase-1 RCT-81	1.0327783	1.3133014	1.260943	1.4841641	1.8578449	1.5810478	1.6705412	0.8500457	1.0320483	0.91265595	0.95905817	0.9500609	0.9592344
Phase-1 RCT-33	1.8680931	1.0410335	1.156652	1.0448849	1.1741794	1.0543974	1.238927	1.1009438	1.2629282	0.9347703	1.2081821	1.2502358	1.0314053
Phase-1 RCT-178	0.5734756	0.5583984	0.8822649	0.7737384	0.93280816	0.93421644	1.0237062	1.0895382	0.9646176	1.4038252	0.8086077	0.7465294	0.7931226
Apolipoprotein CIII	1.0640476	1.4994137	1.074986	1.4731565	1.5217717	1.6408852	0.9794055	1.16628	1.1913952	1.0989498	0.9953143	1.060376	1.0749013
Phase-1 RCT-88	1.0710105	0.9750849	1.008885	1.0757663	1.1370387	1.023773	1.3310875	1.0839231	0.792325	0.9782443	1.0445516	0.90776356	0.9375804
NADH-cytochrome b5 reductase	1.1089	1.3204758	1.2956302	1.1803395	1.3204017	1.023773	1.3310875	1.0839231	0.792325	0.9782443	1.0445516	0.90776356	0.9375804
Alpha 1 - inhibitor III	1.255818	1.1574228	1.7188807	1.3436126	1.2369386	0.7515298	1.6936878	0.8509698	1.4731651	1.051083	0.7978682	1.3087723	1.2331171
Phase-1 RCT-293	1.458731	1.1349186	1.155555	1.087375	1.2712289	1.2680239	1.3304588	0.8509698	1.6263189	0.92589915	1.836177	1.1708777	1.2118228
Paraoxonase 1	1.302454	1.3656	1.4984944	1.3507122	1.4645159	1.4584432	1.4286072	1.0724077	0.9261433	0.70136464	1.1788919	1.478416	1.2477836
Presepsin-1	1.3516233	1.2753796	1.8987394	1.3878656	1.2914281	0.8188112	1.7835559	0.95313865	0.9261433	0.70136464	1.1788919	1.478416	1.2477836
Apolipoprotein C1	1.390838	1.558026	1.2985986	1.4390774	1.9000673	1.8495572	1.542801	0.8575633	1.0440488	0.836301	1.1133919	1.2544612	0.9400049
Cytochrome P450 2C23	1.0541415	1.3328943	1.7531288	1.4081683	1.3464501	1.5638318	1.1341742	0.85769677	0.8823921	0.8580337	1.2402129	1.0951457	1.2885385
Phase-1 RCT-227	1.1172982	1.2234123	1.027883	1.2711573	0.99235505	1.2680239	1.3304588	0.8509698	1.6263189	0.92589915	1.836177	1.1708777	1.2118228
Hepatic lipase	0.83526784	1.2680513	1.5385921	1.2897134	1.428279	1.1705472	0.9040308	0.8040308	1.2971354	0.7634806	0.82693535	0.8865238	0.78612873
Phase-1 RCT-164	0.8734193	1.084061	1.1119642	1.16384545	0.6768201	0.9927115	0.9507881	1.3892102	0.89841694	1.6103895	1.0234885	1.0161036	0.8596331
Multidrug resistant protein-2	1.4257512	0.77748435	0.9666043	0.6769194	0.6528093	0.7378322	0.9208978	1.3891171	0.9553387	1.27278	1.0429456	0.9178316	0.88128203
Insulin-like growth factor I, exon 6	1.788725	0.722779	0.9728841	0.8955737	0.6551628	0.8654805	0.94532655	0.9927395	0.8053419	0.48402142	1.190779	1.2186548	1.0502431
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	1.4620328	1.0805657	1.0366695	1.2702483	0.8903241	1.0638143	1.1098442	0.7399537	0.7399537	0.96784504	1.0186749	1.0066175	0.8250506
Dynamin 1 (D100)	1.6911687	1.1959385	1.0894736	1.1585805	1.2329221	1.2848136	1.3384109	0.8814669	0.9820597	1.028174	1.0741638	1.1259383	1.108143
DNA polymerase beta	1.0487416	1.6464659	1.3189772	1.5166159	1.1068061	1.2851677	1.1378893	1.0680703	1.0813381	0.9585884	0.9068475	0.59110824	0.9188734

Table 30

Phase-1 RCT-173	0.60150441	1.16168966	0.74813564	0.84141759	1.06046339	1.30855588	1.24202255	0.95738118	0.96015805	1.1263902	0.6132749	0.914638	0.84735674
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.8963008	1.6056581	0.70310477	1.25060604	0.66755178	1.296355	0.8644897	0.95208144	1.0469827	1.0326498	1.0135483	1.601618	1.077435
Ribosomal protein L13A	1.6548003	1.5769262	1.5360535	1.4365432	1.6355418	1.4422266	1.6034318	0.997844	0.9602254	1.0379235	0.9853407	1.0165827	1.0279016
Phase-1 RCT-144	0.96291554	0.96363723	0.9797784	0.8529155	1.0506663	0.91744214	1.0343912	1.033204	1.1303204	0.8912724	0.87702626	0.87702626	0.822388
o-H-ras	0.8340203	0.9771665	0.9472085	0.8476008	0.8963201	0.8341	0.77190035	1.207035	1.1446171	1.0707833	0.9425659	0.94812848	1.0182719
Vesicular monoamine transporter (VMAT)	0.87291926	0.82664840	0.8150155	0.8450897	0.68149033	0.77675708	0.5735217	1.0936216	1.0465211	1.0054525	1.0017525	1.0944872	1.1827049
Phase-1 RCT-273	0.9267614	0.5169455	0.6077028	0.7127175	0.7695498	0.59231645	0.9732268	0.9480788	1.158462	1.0987782	1.1272659	1.1727308	1.1727308
Phase-1 RCT-230	0.8964782	0.5712625	0.737655	0.7919134	0.8789224	0.81768876	1.1251643	0.9578018	1.2270108	2.0032307	1.2253743	1.2947855	1.2947855
Phase-1 RCT-74	0.8980551	0.9716253	0.8028318	0.7208494	1.534943	1.3333103	1.5902128	0.84576863	0.86818824	0.8574735	1.034773	0.9525808	1.007173
Phase-1 RCT-30	0.8659555	0.5038924	0.937384	0.7654876	0.8640709	1	0.107248	0.8315135	0.9549828	1.0226313	0.9193347	1.1410251	1.1410251
Phase-1 RCT-158	0.84514655	0.7729237	0.777811	0.78330897	1.01089	1.0891584	1.0807122	0.9433868	0.9960398	0.9570993	0.94237113	0.9204033	0.91238654
Deoxythymine kinase	0.9455323	0.6581948	0.8046885	0.672716	0.8653044	0.9582335	0.5209194	1.2284948	1.0387948	1.7125181	0.9986835	1.0377258	1.1169884
Inositol polyphosphate multikinase (Ipmlp)	0.9157651	0.5934836	0.8046885	0.672716	0.8653044	0.9582335	0.5209194	1.2284948	1.0387948	1.7125181	0.9986835	1.0377258	1.1169884
Neuronal cell adhesion molecule (NCAM)	0.7181725	0.5194448	0.7168703	0.582481	0.9286553	0.7718708	0.6580943	0.9694728	0.8327162	1.30276	0.9601534	1.0670052	1.2344135
Hepatocyte growth factor receptor	0.70763965	0.57473324	0.81393623	0.7704995	0.9286553	0.7718708	0.6580943	0.9694728	0.8327162	1.30276	0.9601534	1.0670052	1.2344135
Empty	0.58159215	0.4578791	0.87549928	0.47011628	1.0168886	1.1118884	0.8534983	0.9004752	0.99303347	0.945288	0.99151656	1.0168248	1.1717073
Dopamine receptor D2	1.0589273	1.2842835	1.1042763	1.193954	0.7650122	0.8080756	0.6950323	1.1778912	1.1401191	0.814251	0.924138	0.8655383	0.840895
Phase-1 RCT-51	0.9454496	0.66430175	0.8471282	0.6815104	0.7786174	0.74495673	0.62195474	0.83227844	0.791308	0.9186743	1.1071419	1.0816077	1.1665289
Four repeat ion channel	1.2790328	0.8728885	0.81940633	0.83420366	1.4211273	1.3510869	1.351151	1.1482767	0.769696	1.2559704	1.10949	1.031721	1.0297390
Adrenomedullin	0.65573867	0.3923465	0.68810215	0.48618192	0.47801876	0.6020698	0.45533505	1.3582339	0.9756617	1.8004282	0.975275	1.1448435	1.4042788
Caveolin-3	0.86831206	0.6961513	0.8172893	0.70764863	1.3241837	1.2284072	1.3604948	1.0589247	0.9364121	1.2418071	0.868911	0.89731514	0.95718926
Phase-1 RCT-129	0.89576256	0.503286	0.7202595	0.89169366	0.84718734	0.82733685	0.80108094	1.0044868	0.88760285	1.0356797	1.0242743	0.9251665	1.0740053
Phase-1 RCT-94	0.83012295	0.8421714	0.8222945	0.9631878	0.9471665	0.8237371	0.68658	0.9599173	1.0308486	1.1776285	1.1578187	1.0985017	1.0741651
Sarcolemmal ratioculum calcium ATPase	1.289378	0.7552026	0.636	0.68183166	0.6651	0.75509084	0.7437487	0.9143379	0.96543598	1.1936738	0.9607753	0.98421593	1.0050211
Phase-1 RCT-79	0.8140561	0.582367	0.7714856	0.5819785	0.8655624	0.829243	0.9430999	0.92330614	1.164218	1.2325149	1.2320861	1.1669736	1.1669736
Phase-1 RCT-262	1.9140154	1.1955302	1.238465	1.239886	1.342061	1.2353935	1.3950046	0.91202956	0.93510413	0.8208436	1.1491478	1.1458165	1.0559881
Phase-1 RCT-151	0.9690204	0.9441008	1.0023498	1.0340489	1.0715112	1.1930484	1.1330808	0.92681108	0.8943138	0.8686261	0.9792159	0.9775844	0.9859514
Phase-1 RCT-70	1.0438928	0.73701173	0.8837392	0.7920347	1.3623966	1.2418743	1.1996154	0.851063	0.8450268	0.9920715	1.1476768	1.0198702	0.902277
Phase-1 RCT-150	0.6451043	1.198886	1.1709765	1.1923054	1.0457848	1.278651	1.1239611	0.9309084	0.88760285	1.3447473	1.3447473	1.2028903	1.252678
26-hydroxyvitamin D3-1 alpha-hydroxylase	0.57524014	0.7345982	0.9265471	0.6277513	0.64805312	0.6277513	0.6075288	1.3554276	1.027425	0.7917452	0.91329235	0.888033	0.8772256
Phase-1 RCT-119	1.5792894	1.0181022	1.0782601	1.1234201	1.0859533	1.0474815	1.2614663	0.9722051	0.8912115	0.7680287	1.0641475	1.0157478	1.0582668
Penicillin 3-keatoyl-CoA thiolase 2	0.7710029	1.0521388	1.1949503	1.1252252	1.041445	1.0742385	1.456424	0.7972243	0.8912115	0.7680287	1.0641475	1.0157478	1.0582668
Phase-1 RCT-146	0.6658551	0.82697237	0.7957894	0.69451696	0.79882746	0.9003861	0.8757533	1.2148983	1.0212888	1.408957	1.1029927	1.0413145	0.9523886
Superoxide dismutase Mn	1.6126071	1.5403765	1.3978594	1.109328	1.0984142	1.209754	1.435577	1.2165421	1.0450972	1.343938	1.0771905	0.9768004	1.0815918
Phase-1 RCT-115	0.49109554	0.58127296	0.7916365	0.6363793	0.7142088	0.73755157	0.565792	1.1478451	0.7505276	1.2766701	1.0587457	0.8878025	1.0178589
Alpha-1 microglobulin/bikunin precursor (Amp)	1.0794332	1.5361983	1.9155146	1.7634073	1.737689	1.7440808	1.7327298	0.856624	1.0749346	0.86846757	1.266251	1.1530476	1.1171973
Phase-1 RCT-18	0.96507436	0.83448493	0.8786892	0.8754826	0.84652305	0.84760586	0.74700034	0.8417595	1.0296792	0.8463101	1.084882	1.0067082	1.0148994
Masspin	1.0894916	0.72096504	0.9084354	0.7740274	0.72083557	0.7200511	0.6520044	1.4897422	1.0068015	1.422193	1.0001371	1.0995977	1.3053276
Decotin	0.70643528	0.6584422	0.7391304	0.5674275	0.69286254	0.68332106	0.58757234	1.1715251	1.0284413	1.3681856	1.1318239	1.1899469	2.1639605
Retinoid X receptor alpha	0.7515787	0.8933051	0.8679327	0.7724155	0.7241686	0.69030265	0.8444795	0.9432727	0.8466988	1.2341539	0.8449808	0.85280474	0.8209609
Cellular nucleic acid binding protein (CNBP)	1.3452489	1.2796228	1.2868307	0.7724155	0.7241686	0.69030265	0.8444795	0.9432727	0.8466988	1.2341539	0.8449808	0.85280474	0.8209609
NADPH cytochrome P450 oxidoreductase	0.9266659	0.70849645	0.8227477	0.6899597	0.73333216	0.73333216	0.6340915	1.1694089	0.8168727	1.410974	0.995299	0.9985663	0.92838834
Malic enzyme	0.9124082	0.5926108	0.7684208	0.6068073	0.5440393	0.5384104	0.53118396	1.222172	1.4943807	1.1453468	1.06703	0.85549694	0.75886514
Caspase 1	0.57871513	0.82236495	0.8402255	0.70342106	0.67881614	0.71453875	0.655258	1.1706816	0.8847006	1.3962607	0.88859286	0.93371433	0.9750778
Cystatin C	1.8283756	1.2381157	1.398685	0.9597118	1.1228892	1.1230419	0.8241904	0.98081625	0.98185476	0.9768036	0.7705708	0.8559896	0.9762615
p53/CDC	0.6984074	1.1938545	1.0682738	1.0253315	0.9602161	0.7093477	0.89009468	1.381924	1.0279332	1.329427	0.9900881	1.1308002	0.9120043
Poly(ADP-ribose) polymerase	0.73959446	1.0289971	0.94971335	0.9087328	0.82440364	0.91690084	0.742717	1.0390704	1.0468425	1.0480837	0.92881954	0.87019786	0.9673387
Tissue plasminogen activator	1.1211787	0.8764754	0.9078947	0.8629918	0.9619154	0.88873784	0.85838044	0.9070756	0.9889228	0.81125176	1.160264	1.0449464	0.991197
Multidrug resistant protein-1	1.1247864	0.7954047	0.8592487	0.8575788	0.8020597	0.8020597	0.744857	1.2526847	0.9575232	1.2458156	0.9342286	0.844187	0.845842
Phase-1 RCT-207	0.62652797	0.8876154	0.83531404	0.8233585	1.0842428	1.1331265	1.2131488	0.9843953	0.9789881	1.1781572	0.9198301	0.9132478	0.926181
Phase-1 RCT-181	1.1080437	1.0100851	0.958702	1.0459083	1.2317473	1.17387	1.164897	0.7274272	0.9262209	0.81422725	1.2139039	1.0821565	1.021868
Gap junction membrane channel protein beta 1 (GJB1)	1.1334886	0.55541945	0.82831945	0.8029149	1.3103861	1.1400872	1.3520922	0.8008771	0.5745196	0.58892053	1.2671463	1.244474	1.127537
Aqueporin-3 (AQP3)	0.8217716	0.87748874	0.8104658	0.7708375	1.1459538	1.0884567	1.1716756	1.0582706	0.9640191	1.1486506	1.1380027	0.9938931	0.98119557
Myelin basic protein	1.038284	0.8773055	0.8572248	0.8508086	0.8288654	0.6577318	0.80565254	0.8727683	0.82726517	0.69674546	0.922628	0.9243214	0.900015
Calgranulin B3	0.7539986	0.9256873	0.8591825	0.890603	1.03875	1.1372293	1.2065081	0.86133828	0.8900038	1.0625151	0.85339093	0.9127928	0.94100577

Table 30

Phase-1 RCT-156 Professors activator 28 alpha	1.0458912 0.8310835	0.84416175 0.515143	1.1761231 0.7412053	1.1588861 0.8458837	1.1957524 0.8594404	0.96547014 0.7333753	1.3742383 0.50081094	0.86397326 1.2118626	1.0343488 1.0800581	0.7235635 1.3897442	0.73651816 0.86502558	0.8220857 0.88909476	0.797267 0.90067816
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 hr: yes-rect, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint															
(1)															
Compound/Dose (2)	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50	GAN 50
Animal Number (3)	2448	2447	2448	2448	2448	2448	2448	2448	2448	2448	2448	2448	2448	2448	2448
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Phase-1 RCT-107	1.0247049	1.1038842	1.0252148	0.8253145	1.2351356	0.79141086	0.9404086	0.6739895	0.60836005	0.9413022	0.83390284	1.0299149	0.9288528		
Retinol dehydrogenase 1 (RHDH)	0.5906452	1.3462048	1.6577872	1.5316918	1.127557	1.082868	0.97355133	0.81180143	1.1230943	0.49676588	0.83902073	0.7858356	0.6175002		
Proliferating cell nuclear antigen gene	0.8703236	0.82826465	0.763534	1.054688	0.9429588	1.008004	1.033107	0.80942124	0.9073158	0.9633844	1.5824834	1.940828	1.2828545		
Cytochrome P450 2D18	1.000943	0.8740153	0.8756053	0.7487728	1.1203245	0.9047123	0.8995595	1.3008077	1.051871	1.0862052	0.7674768	0.4282089	0.7884631		
Cytochrome P450 2C11	0.5508739	0.844448	1.028321	1.1993438	1.103461	0.9678716	1.1582094	0.8438622	1.0308007	0.9149127	1.5715137	1.4581174	1.7810723		
Phase-1 RCT-280	0.6452466	1.1805738	1.4015647	1.3923291	1.0433679	0.9881342	0.9576809	0.78029384	1.1969084	0.80917215	0.688329	0.9352206	0.91563994		
Phase-1 RCT-59	0.9532038	0.9808337	0.92258346	0.9418787	1.087381	1.0133888	1.0244809	0.948987	0.9509847	0.8919135	1.0879138	0.947811	0.9582203		
Beta-actin, sequence 2	0.8398964	1.115895	1.0726321	0.82849585	1.0058373	1.0573871	0.95905944	1.1230154	0.8503356	1.1173711	0.858004	0.9434004	0.87776563		
Phase-1 RCT-282	1.1374984	1.0335142	1.0442388	0.9229884	0.97853583	1.0196528	0.94293547	0.8630784	0.8531222	1.0107578	1.178217	0.9305047	0.9378227		
Pyruvate kinase, muscle	1.0585396	0.99248866	0.9847298	0.8603481	0.99420786	0.95570564	0.8914515	1.066003	0.9858398	0.9364871	0.86943744	0.8797815	0.9390005		
Osteocalcin	1.0779759	0.9888831	0.9330887	0.9891484	1.0754539	1.0705161	0.9802735	1.1826894	1.158411	1.300869	1.074457	1.0242808	1.1083574		
Calgranulin B1	0.88287374	1.0034038	1.0119553	0.8275995	1.0422692	1.0191344	1.034998	0.72047395	1.0058984	0.6959946	0.6158802	0.7674581	0.84657276		
Apolipoprotein AII	1.4653546	1.3157481	1.0944678	0.8089844	1.3080565	1.0734365	0.93739694	1.1620825	1.1464187	0.3170188	0.25051842	0.46022353	0.5807542		
Conexin-32	1.1385501	1.0028537	0.8972745	0.7284055	0.8854814	1.3620304	0.815564598	1.2289202	1.4236456	1.1829411	1.452383	2.963026	1.8151292		
Phase-1 RCT-109	1.23092	1.025732	1.0458955	0.83168043	1.09377	1.0472778	1.0685482	1.2178714	1.1340881	0.7350944	0.6282281	0.5484602	0.8414477		
Glycine N-methyltransferase	1.2937168	1.4627147	1.0691334	0.90560333	1.4954826	0.8396655	0.8404734	0.73162276	0.79250473	0.8764887	0.46531862	0.8655225	0.7874077		
Lysine-gamma-glutamyl transferase	0.8167269	1.3264241	1.430607	1.0283765	1.0687726	1.0139036	1.0255589	1.16327	1.1287555	0.6588534	0.43852034	0.97787166	0.73093677		
Phase-1 RCT-226	0.87420597	1.0106006	1.0628941	0.9873255	1.1270578	1.1128973	0.9689243	1.1288209	1.1160306	0.6982028	0.6103729	0.83004544	0.9542281		
Carbonic anhydrase III	1.3839743	0.7031444	0.8068246	1.598903	2.034468	1.7917086	0.6551627	0.8450137	1.2183161	1.2482182	0.6580184	0.3581153	0.5613003		
Phase-1 RCT-76	1.002089	0.8931286	1.020434	0.95031835	1.087065	1.0066932	1.1325098	1.0011449	1.8102543	1.0979181	1.1207622	0.909100	1.0345168		
Ureidyl transferase	1.223543	0.946059	1.020601	2.2521565	1.871191	1.2704374	0.9800029	1.4762821	1.2508895	0.680381	0.7662625	0.7884131	0.8028156		
Insulin-like growth factor I	1.2847319	1.0117508	1.0454576	1.1310556	0.9043822	1.3802372	0.83031235	2.400184	1.1244338	0.955663	0.6923784	1.0094558	0.8262244		
Aryl sulfotransferase	1.3131044	1.3598396	0.9590909	1.3398159	1.346104	0.89440295	0.9831712	1.010393	1.0071678	0.81072856	0.6341425	0.8172894	0.8497354		
Phase-1 RCT-185	1.1907307	0.86984996	1.0522643	1.444315	1.0898152	0.9444839	0.9770886	1.0513736	1.0187918	0.94243574	0.7824096	0.82218045	0.7857768		
Cofilin	1.0889548	1.1183344	1.1435035	1.2308908	1.0588533	0.95753684	1.028558	1.4348117	1.1317727	1.3573351	1.1218054	1.0201671	0.9458023		
Stat3	1.0171176	0.9989894	0.9212006	1.0026892	0.8101397	0.7342157	0.9731366	0.7863344	0.8549556	1.0308323	1.0988553	1.0488864	1.1329594		
60S ribosomal protein L8	1.3491542	1.2082744	1.0249484	0.7560047	0.9516573	1.0160515	0.98823136	1.2680551	1.0231395	0.9284184	0.5710654	0.59785366	0.8667292		
Calpain I heavy chain	0.98296034	1.0602243	1.1397588	0.8500484	0.9963235	0.9582918	1.00152	0.8532045	1.0731395	1.12144	1.189245	1.2191828	1.0864811		
Calpain type II	0.84457684	0.96284274	0.9876089	1.0323948	0.94536835	0.73558874	1.1113228	0.97549184	1.066875	0.8350575	1.0834678	1.0065354	0.89714458		
Phase-1 RCT-178	1.3361789	0.9335581	0.9650671	0.93181443	1.0578073	0.9146582	0.8994339	1.1257797	1.0792457	0.96765333	0.5386188	0.8437638	0.95822775		
Voltage-dependent anion channel 2 (Vdac2)	1.1846077	1.2289376	1.1282351	0.9291124	1.0123069	1.0426207	1.0803615	1.0397259	1.0232518	1.0944687	0.8437638	0.95822775	0.9821643		
Phase-1 RCT-182	0.9996181	1.0000541	1.001761	0.83117064	1.0441685	1.0842748	1.0878668	0.9878576	1.1126225	0.8082399	0.75772536	0.8604381			
Adrenine nucleotide translocator 1	0.77957894	0.8886606	0.8255238	0.8867431	0.8865783	0.67827927	1.0321319	1.359042	0.93381206	0.80002856	0.93430674	0.8345177	0.7245378		
Thyroxine beta-10	0.8932892	1.0281269	0.8818312	0.9135022	1.2958492	0.9837859	0.8309888	1.2810351	1.1150183	0.7098458	0.74202156	0.6943318	0.7594228		
High affinity IgE receptor gamma chain (FcεRIγ)	0.9808078	1.0025076	1.0561334	1.2060736	1.1900371	1.0210228	0.9258942	0.8666524	0.9685314	1.241382	1.1622772	0.92257965	1.0401284		
Gamma-actin, cytoplasmic	0.7102713	1.2408996	1.1031802	0.75204825	0.88943523	0.94085234	0.9533553	0.9170009	0.78832847	1.0951501	0.8724654	1.0168988	1.0058821		
Uncoupling protein 2	0.7333043	0.8765250	0.83763485	0.888764	0.95878614	0.75314814	0.8992566	0.9718789	0.99476535	1.0439873	1.1245694	1.0282018	1.0613145		
Phase-1 RCT-34	1.2120267	1.263252	1.2452625	0.85891704	0.9242803	0.9857085	1.042285	1.0401745	0.9727725	1.1770822	0.864572	1.02608	1.2338162		
Phase-1 RCT-31	1.9283898	1.5931308	1.5243588	1.0881018	1.1623559	1.0077921	1.0828336	1.5533718	1.2171338	1.216257	1.037811	0.97834884	1.002211		
Cyclin D1	0.8783928	0.97051074	0.89341605	1.0522084	0.82337075	1.1047227	1.0538383	1.1308804	0.7108607	1.2019789	1.8547151	1.420534	1.0112745		
IgE binding protein	1.0469251	1.1443789	1.1142975	0.8887257	1.0653421	0.9683738	0.9434594	0.84598555	0.9094039	1.006298	1.0537653	1.1314516	1.1557009		
Zinc finger protein	1.0174272	0.8557721	0.96088858	1.0117842	0.9270515	0.7188683	0.9721121	1.0769095	1.2192885	0.869652	0.8922017	0.95192915	1.1744935		
Phase-1 RCT-138	1.1492808	0.6532489	1.0169184	1.0362072	0.98360058	1.0115153	0.9277764	0.162262	0.9033532	0.7177148	0.93096507	0.87428864			
Alpha-tubulin	0.5984575	0.98767304	0.9247625	1.0080634	0.9135685	0.6678408	0.9576809	0.9303559	0.8429738	0.76192164	1.0087128	0.85147085	0.69151014		
Alpha-phosphatase	1.202432	1.0226085	1.0847831	1.0622408	1.041074	0.8841774	1.0246893	1.4722872	1.0968278	1.0450599	0.81277055	0.7783665	0.8600883		
Calpain 2	1.0518946	0.9833738	1.0251286	0.8687088	0.9003802	1.0221417	1.0182467	0.9284874	0.9069204	1.0837089	1.047852	1.0083041	1.1158221		
Phase-1 RCT-12	0.81580836	1.0937222	1.0796448	1.1242185	0.995958	0.9043849	0.9878339	1.0224918	0.87280387	1.0740346	0.7339018	0.93878594	0.9139475		
Cathepsin B	1.1077897	0.9751138	0.8449645	1.0528709	1.0558991	1.1176225	1.1913154	1.1346491	1.2168491	0.9170707	0.8043238	0.8635784	0.85165185		
Phase-1 RCT-24	0.53428485	1.2714984	1.0972254	0.8621769	0.9660437	0.9708305	0.95468084	0.91586596	0.8665056	1.1868398	0.866612	0.88789584	0.83180543		
Melanoma-associated antigen ME-491	1.2173206	0.9545053	0.8930038	0.9418379	1.0748545	0.985447	1.0702834	1.1287378	0.885046	1.6418222	1.3533549	1.1491184	1.08302		

Table 30

Phase-1 RCT-68	0.9114007	1.0272478	1.0348718	0.9910607	1.0659542	1.0318122	1.0093551	1.0923129	1.0184689	1.1973742	1.1922314	1.0930443
Ordin G	0.97446597	0.9683746	1.0081916	0.7914428	0.90445908	1.0434604	1.0263927	0.8607594	0.9938694	0.8627088	1.4286153	1.4426387
Hypocanthine-guanine phosphoribosyltransferase	0.57139987	0.9353993	0.9272356	0.9277091	0.8809908	0.8615011	1.0700054	1.2660183	0.8351604	0.9261766	0.2265425	0.78662463
Tissue inhibitor of metalloproteinases-1	0.8386283	0.92865627	0.9776821	1.074374	1.0530444	1.0088597	0.9799574	0.8979807	1.0691867	0.99785216	1.2727247	1.3707148
ID-1	0.91850784	0.99189335	0.90411896	0.9973374	0.8335782	0.920325	1.0511483	1.021465	0.8967277	0.9300547	1.1821538	0.90331376
Ribosomal protein S8	0.9500865	0.9673298	0.85532806	1.1528183	1.0246154	1.05061	1.2338217	1.087974	1.0077852	0.9287931	0.83700514	0.7698133
Heme oxygenase	1.6527284	1.1091547	0.990816	0.921707	0.86598825	0.84394237	0.937385	0.88709728	0.9625728	1.2387082	1.48297	1.322709
Ribosomal protein S6	1.4034972	1.1939172	0.9925965	1.206317	1.2643255	1.0366814	1.104317	1.3554044	1.151473	1.054328	0.8203899	0.75588784
Ribosomal protein S17	1.2943561	1.197868	1.0435541	1.2287242	1.2823712	1.2027469	1.058587	1.405907	1.1405907	0.9077254	0.86926418	1.0695587
Nucleoside diphosphate kinase beta isoform	0.93049484	1.0778191	0.9401888	0.97120667	0.9454722	0.95187585	0.9221227	0.9655651	1.2511815	1.061574	0.7853148	0.8027168
14-3-3 zeta	0.96195866	1.0519402	0.96558286	0.93338025	0.881092	0.81297078	0.9744227	0.87353908	0.83639574	1.1437437	0.8059645	0.8812535
60S ribosomal protein L8 (alternate clone 1)	1.3733717	1.1861062	1.1054485	0.7764004	1.0718673	1.138269	1.0657971	1.2314149	1.1171018	0.9170557	0.8059645	0.8812535
Beta-tubulin, class I	0.70309474	1.6715432	1.4063506	1.1081464	0.8207447	0.89007028	0.91063875	1.1021557	0.8061521	0.8223152	0.8174597	0.958084
Organic cation transporter 3	1.0185971	1.0618166	1.0012343	0.7932667	0.84429055	0.71150374	0.9416784	1.3037317	1.0228802	0.9653843	0.890988	0.8526347
Beta-actin	0.7200688	0.9794176	0.86249648	0.8716457	0.9646824	0.9046824	0.91472424	0.91482864	0.89093129	1.0145978	0.7025559	0.8076309
Calpelin S	1.1002234	1.1281626	0.8521719	1.0816596	1.0078942	1.0423189	0.91688704	0.87189595	0.89566117	1.0871462	1.0572885	0.8934793
Biliverdin reductase	0.8870872	0.9784003	0.8443783	0.9597346	0.91979996	0.91632664	0.90337586	0.85561219	1.1232477	1.3168821	1.1545552	1.3846731
Phase-1 RCT-154	1.0473787	1.0327737	1.0133255	0.9544547	0.8885143	0.8678671	1.0118642	0.71030396	0.92025834	1.0714726	1.53607	1.0777881
Phase-1 RCT-293	0.9722048	1.0527238	1.0071238	0.9254881	0.8586751	1.0032208	1.0385657	1.057262	0.8994616	1.0191917	1.0956976	0.9303865
Annexin V	1.0252572	1.0486811	1.0083944	1.0779487	0.90702945	0.98016993	1.0171762	1.1202312	0.9440342	0.9303072	1.1633089	1.0547216
Complement factor I (CFI)	1.8730488	1.1388308	1.074834	0.8993305	1.0024728	1.1295008	1.0175703	1.1983344	1.1267523	1.268309	1.0711945	0.9628168
Phase-1 RCT-276	1.0576347	0.9703906	1.0106322	0.94333917	1.1619494	0.9749653	1.0166718	1.173457	1.0318335	1.2680054	1.0584324	0.96611288
Tyrosine aminotransferase	1.1746349	1.1255773	0.8565033	0.8503776	0.90545815	1.2689423	1.0170764	1.0853057	0.74094375	1.1346322	1.5669928	1.4837408
Glutathione peroxidase	1.0512916	1.2518058	0.85050734	1.6599257	0.90922195	0.917475904	0.8202811	1.5846051	1.2819139	0.99772814	1.067443	1.2105445
Cardiac anhydrase III, sequence 2	1.6881942	1.3421833	0.91045016	0.8678658	1.1189586	1.1733172	0.83020674	1.0885445	1.0623525	0.82215168	0.9160135	1.0053362
Phase-1 RCT-192	1.6807683	1.250284	0.8603418	1.040482	1.127306	1.165601	0.8182374	1.0452886	0.8083715	0.9176398	0.86220948	1.3137581
Glutathione S-transferase theta-1	0.75554115	0.92488347	0.9059885	0.84397163	0.8928873	1.0935097	1.2190021	1.0826	1.0142413	0.9604054	1.0909839	1.1322403
Phase-1 RCT-168	0.83468115	0.98764217	0.9059885	0.84397163	0.8928873	1.0935097	1.2190021	1.0826	1.0142413	0.9604054	1.0909839	1.1322403
Phase-1 RCT-182	1.1743829	0.9105535	0.9342077	1.09121	0.8981101	0.9577286	1.1094565	0.92769833	1.2002661	0.870255	0.83170885	0.8342828
JNK1 stress activated protein kinase	1.1641034	1.2140715	1.0359477	1.3378012	1.0058443	0.9202016	0.9576346	0.879944	0.959817	0.7070149	0.87031835	0.8933229
Phase-1 RCT-81	0.97681244	0.862092	0.96755266	1.0537884	1.0488619	1.0076666	1.0399157	1.1694027	1.0223818	0.9786605	0.70796725	1.0065745
Phase-1 RCT-33	1.1695337	1.0372019	1.0602652	0.7572409	1.1449175	1.2658954	1.5454814	1.1695069	0.83421775	0.7883655	0.70297134	0.8779658
Phase-1 RCT-178	0.83568886	0.6963116	0.72538826	0.8020699	1.2262892	0.965906	0.84386616	0.6393517	0.89726396	0.8363301	0.48749938	0.4103028
Apolipoprotein CIII	1.1601214	1.0611722	1.0845393	1.1209154	1.0829498	0.86564714	1.0496573	1.0785611	0.98053593	0.8924046	1.0513904	0.8036248
Phase-1 RCT-98	0.9214799	1.087038	1.265427	0.982649	1.005755	1.057666	1.0122821	1.033182	0.954378	1.015492	1.1816578	1.1831558
NADH-cytochrome b5 reductase	0.7028539	1.3073257	1.1408774	1.1678334	1.0002352	1.1057574	1.1210519	1.0018752	0.9780388	1.1628563	1.0501502	1.0304784
Alpha 1-inhibitor III	2.1685425	0.97542864	1.0522372	1.8078434	0.8339955	1.5018506	0.9036681	1.3270335	1.1932428	1.053757	0.88985187	0.7207785
Phase-1 RCT-233	1.0730689	1.0527492	1.3704119	1.1760393	1.0731655	1.0344214	0.8341405	0.8035225	0.8623127	1.0687032	0.88767457	0.2692574
Paraoxonase 1	1.4703928	1.0894068	1.0056483	1.6534984	0.883316	1.078891	1.0778953	1.2665768	1.1268002	1.0519454	0.9207841	0.7604672
Proteinase-1	2.4946449	1.0347936	1.0921187	1.5100413	0.832739	1.5125183	0.7658772	1.3624917	1.1972228	1.015638	0.8184654	0.72538844
Apolipoprotein C1	1.4081128	0.9109588	1.2368878	1.8066313	1.423688	1.018908	1.012818	1.2538557	1.1780088	0.8650843	0.90443987	0.7444707
Cytochrome P450 2C23	1.6069746	1.0240436	1.0689898	1.298441	1.064432	1.1463947	0.88004316	1.1983068	1.2692882	0.8439085	0.8484219	0.9060404
Phase-1 RCT-227	1.6358809	0.8443374	0.98427485	0.9211278	1.1678652	1.0080024	1.1072897	1.0254598	0.88863033	1.0968178	0.92439897	0.8428804
Hepatic lipase	0.7009525	0.95180706	1.1260321	0.8648179	0.868978344	1.0693065	1.0777204	1.0168936	0.7976769	0.7549979	0.8345491	0.8392833
Phase-1 RCT-184	0.84810437	0.8510875	1.086418	1.113289	1.0548955	0.8434994	0.9874787	1.2462848	1.084932	0.9263251	1.000542	1.020412
Multidrug resistant protein-2	1.1377316	0.9754829	0.96334535	1.2336646	1.0063257	0.8693445	1.1159495	0.90260005	0.97857755	1.0331792	1.0517021	1.0446166
Insulin-like growth factor I, exon 6	1.3375257	0.8278587	1.1883581	0.83982786	0.76289153	1.3272628	0.88892355	1.2628288	1.2079836	0.8434059	1.0443228	1.0473897
N-hydroxy-2-acetylaminofluorene sulfotransferase (STIC1)	1.4210869	0.862047	0.8603764	1.1862419	1.2212319	1.1463763	1.111232	0.93628887	0.9682065	1.0100728	0.7773409	0.6957301
Dynamin-1 (D100)	1.083004	1.0541253	1.1303124	1.1238568	1.1226566	1.0706693	0.8914508	1.1510776	0.9848704	0.953786	0.8048812	1.0206088
DNA polymerase beta	0.9450376	1.0597925	1.0289562	1.2013118	1.194596	1.0739883	0.9201735	1.3877809	1.0717434	1.119382	1.0361001	0.9509045

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Phase-1 RCT-173	0.8539892	0.8587131	0.84953576	1.0029357	1.179146	0.904216	0.9479392	0.8149492	0.8953976	0.75940528	1.0101525	0.7608692	1.0390757
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.9574584	1.1049708	0.9590718	0.93595076	1.0837769	1.0096983	1.0727031	1.2081362	1.155216	0.896786	0.89657843	0.8620674	0.7407763
Ribosomal protein L13A	0.164361	1.0721039	0.9210273	0.744121	1.1363084	1.208862	1.033962	1.3101004	1.2734498	0.8014118	0.6314735	0.8709574	0.8062606
Phase-1 RCT-144	0.8637709	0.930295	0.9107347	1.0730735	0.84690185	0.8257756	0.8311324	0.6342586	0.7701769	1.1728516	0.9328334	1.0665451	0.8665451
c-H-ras	0.9457534	0.8831507	0.94871	0.8356273	0.9518765	0.95560473	1.0076381	0.8478954	0.8478954	0.72042423	0.566257	0.7228469	0.8468424
Vesicular monoamine transporter (VMAT)	1.0316078	1.0146188	0.8693986	1.3428671	0.8882623	0.7244	1.209168	0.8141739	0.8044617	1.21894002	1.1010705	1.5281391	1.5281391
Phase-1 RCT-273	1.0897249	1.0102439	0.9080202	0.98919	0.92243336	0.76060128	1.1387029	0.74889491	0.92869491	1.0774544	1.4827071	1.552153	1.2532376
Phase-1 RCT-220	1.1312366	1.2040797	1.0498688	1.0256018	0.9840903	0.87605286	1.0717218	0.75521237	0.8377274	0.87804457	1.0742236	1.0567791	1.2130462
Phase-1 RCT-74	0.9579015	0.958338	1.0176657	0.8542598	1.0273962	1.0581135	0.98530346	0.6518434	0.94628598	1.1639708	1.4542471	1.477315	1.2377656
Phase-1 RCT-80	0.990102	0.9726635	1.0112221	1.0178411	1.1452289	0.9542276	0.8954838	0.7428813	0.8387808	1.0240705	1.5230335	1.3771559	1.4235555
Phase-1 RCT-158	0.9530828	0.9722525	0.93612104	0.8467808	1.033958	0.9781077	0.6512039	0.721498	0.7835555	1.1813928	1.252695	1.1710846	1.3804525
Deoxydiphosphate kinase	1.1315594	0.97106314	0.92417526	1.3464134	0.8039747	0.89387155	1.0217624	0.8110325	0.9597588	1.3277859	1.5012529	1.6640098	1.2590011
Inositol polyphosphate multikinase (IPMK)	1.049064	0.9390845	1.000942	1.1076931	1.0498662	0.93978603	1.0889671	0.7243202	0.81007254	0.9330818	1.2020714	1.0333705	1.0695688
Neuronal cell adhesion molecule (NCAM)	1.0408278	1.0284044	0.9007981	0.9681187	1.0197055	0.92122006	1.0744258	0.7839385	0.7839385	0.8808523	1.122529	0.9584491	0.93272525
Hepatocyte growth factor receptor	1.0459861	0.99417886	0.8899806	1.1748457	1.0043381	0.96964306	1.0151324	0.9275515	1.1150966	1.1050571	1.107734	0.734811	1.3396865
Empty	1.0094615	1.089317	0.9224329	1.0434417	0.961531	0.8805285	0.94297147	0.6225381	0.760011	1.1053021	1.6536826	1.4317169	1.7333708
Dopamine receptor D2	0.92691916	0.9645155	0.8928493	1.1820971	0.85110873	0.8448814	1.0593558	0.9223211	0.8762245	1.409167	1.2006476	1.240343	1.240343
Phase-1 RCT-51	1.1156324	0.9953933	1.1314457	1.1335793	0.9340335	0.8083854	0.9748761	0.895959	0.84951036	1.0541251	1.0623853	1.2497598	1.4505065
Four repeat ion channel	1.020087	1.0435948	1.1310295	0.92507875	1.0453945	1.0282454	0.9748761	0.895959	0.84951036	1.0541251	1.0623853	1.2497598	1.4505065
Adrenomedullin	1.0517472	1.1047113	0.97388244	1.1968746	0.7207315	0.8433748	1.2372724	0.5750548	0.7619263	1.1356678	1.399454	1.2191665	1.4182731
Caveolin-3	0.89635944	0.90092317	1.0530538	0.92778057	1.0326568	0.99410635	0.99245113	0.8662086	0.840262	1.1252083	1.5796344	1.411263	1.82464
Phase-1 RCT-128	0.89179686	0.96858443	1.0283332	1.0498749	1.0254713	0.9366665	0.9673344	0.86437545	0.86437545	1.0483305	3.6162329	1.4139266	1.376933
Phase-1 RCT-94	1.1532372	1.1189168	0.7397089	0.9571731	0.86282045	0.88154256	0.8609582	0.7547762	0.8119526	1.1254554	1.3521024	1.218457	1.1752298
Sarcoplasmic reticulum calcium ATPase	0.8963311	0.9448483	0.8549105	1.0980353	0.8075207	0.86073955	0.9434658	0.93334544	0.7826321	1.031892	1.076812	1.021155	1.211491
Phase-1 RCT-78	1.16101	1.1132923	1.036632	0.9471094	0.8724482	0.94473808	1.0385118	0.75514704	0.8430405	1.1022858	1.1300019	1.0990009	1.3601471
Phase-1 RCT-252	1.8928675	1.1051728	1.1483838	0.9258889	1.069872	1.0605987	0.854948	0.9834451	0.1517278	0.9138388	0.57601845	0.8088007	0.9730013
Phase-1 RCT-161	0.92956765	0.9729272	0.9482284	0.89159598	1.1768484	1.0238623	0.928982337	1.0121589	1.024806	1.0729907	0.880493	0.9784687	0.8850635
Phase-1 RCT-70	0.9452878	1.0668652	1.1000259	0.7009177	1.1377698	1.0154728	0.9750678	0.9289166	1.099502	1.4357742	0.88912215	1.0265446	1.0872884
Phase-1 RCT-150	1.3264298	1.0985853	1.1180745	1.037943	1.1416432	1.0059633	1.0820769	1.1851745	1.1712263	1.0519726	1.3077832	1.4130416	1.0785952
25-hydroxyvitamin D3-1 alpha-hydroxylase	0.81390357	0.9295583	0.7555104	1.038823	0.8626554	0.80289455	0.9327352	0.86437545	0.86437545	1.0483305	3.6162329	1.4139266	1.376933
Phase-1 RCT-119	1.4931554	1.0762972	1.1581716	0.8955443	0.95423887	1.2009098	0.92860845	0.97080475	1.091257	0.98971825	1.106625	1.2245288	1.2521435
Peroxisomal 3-ketacyl-CoA thiolase 2	1.0208178	1.0379031	1.033352	0.97379852	1.0076243	1.054898	1.262289	1.2503115	1.1885382	0.87196983	0.9210687	0.612192	0.8464565
Phase-1 RCT-146	1.148478	1.125813	1.0173331	1.003929	0.8735628	0.7550023	0.97443444	0.8896707	0.7753984	1.2429338	1.7573133	1.58435	1.7684478
Superoxide dismutase Mn	0.9510349	1.0865959	1.0947356	0.9070521	1.118777	1.153721	1.2710907	1.0162734	0.9493937	0.90749323	0.86501656	0.91385606	1.0183172
Phase-1 RCT-115	1.0123153	1.0969859	1.0111514	0.81213903	0.9418152	0.9311643	0.9489594	0.9250694	0.969015	1.129646	1.1200488	1.2910761	1.1860358
Alpha-1 microglobulin/bikunin precursor (Amlp)	1.4168785	0.97432953	1.0036223	1.0281631	1.068309	1.0288592	1.1122848	1.3361895	1.1243858	0.9660763	1.0158962	0.97660124	0.9285816
Phase-1 RCT-18	0.91250557	0.9403433	1.0578286	0.9155904	1.4180218	0.8694845	0.84230867	0.8409452	0.8745752	1.044239	1.3321319	1.3134539	1.0746598
Masspin	1.0370535	1.0283208	0.9589213	1.1765488	0.8876275	0.81393035	1.1232535	0.7652442	1.2302894	1.1086542	1.3922881	1.218659	1.9447884
Decorin	1.0663356	1.2155205	1.3315581	0.99052175	0.8174507	0.7491512	1.0718565	0.6851788	0.84206533	1.4412485	1.3993071	1.2084045	1.5653833
Retinoid X receptor alpha	0.9172485	0.9500611	0.8422882	0.7669407	0.844228	1.0102165	0.9308312	0.93778616	1.0606284	0.7897214	0.92015415	0.91244024	0.9438247
Cellular nucleic acid binding protein (CNBP)	0.9887058	1.1488224	1.0184741	0.8847253	0.89388035	1.0737041	0.91528663	1.2098694	1.0681514	0.8168031	0.8316968	0.7568128	1
NADPH cytochrome P450 oxidoreductase	0.9894715	1.0584192	0.96727835	0.74403644	1.0724933	1.155497	0.96381625	1.1989115	1.1412183	0.89350015	1.0139718	1.151516	0.8519766
Malic enzyme	0.6328429	0.9595101	0.8886559	1.027181	0.8405788	0.7911469	1.0994517	0.73283297	0.88580334	1.1943945	1.090469	0.9899355	1.3711182
Caspase 1	0.86698703	1.0923139	0.9358005	0.9580678	0.8977034	0.5574607	0.94368616	0.7342145	0.7885203	1.1940389	2.3632288	1.807872	1.4716772
Cystatin C	0.8536607	0.938111	1.0804843	1.1344842	1.0939704	0.8694426	1.0406481	1.0578218	0.9186271	0.80237724	1.1243123	0.90659153	0.98628247
R5C2C	1.1242343	0.94059784	0.8471983	1.0280762	0.8145025	0.9878539	0.9704976	1.064472	1.1062802	0.8070496	1.2296114	1.1348927	0.9113011
Poly(ADP-ribose) polymerase	0.9469108	1.0371351	0.8419241	1.0171349	0.9688042	0.8038477	1.0195795	0.9571172	0.94630635	1.0403384	1.2128718	1.0137104	0.86823784
Tissue plasminogen activator	1.0563408	0.9884006	1.0890807	0.83747628	0.8061817	0.9611201	0.97208966	0.9204846	0.94284983	1.0360544	1.330673	1.1808128	1.548785
Multidrug resistant protein-1	1.0284012	0.9875502	0.9481992	0.7844509	1.0686489	1.0062571	1.0926233	0.733273	1.0481701	0.9890724	0.95693284	1.0288575	1.0520599
Phase-1 RCT-207	0.98046327	0.84753957	0.8722201	0.93187105	1.0971515	0.8690403	0.9137513	0.740268	0.8002333	0.91516274	0.884823	0.8958882	1.0355797
Phase-1 RCT-181	1.0082766	1.101683	1.0347914	0.957415	1.0540012	1.1098089	0.9512962	0.95387045	0.95387045	0.90765107	0.9463097	0.9463458	1.0355797
Gap junction membrane channel protein beta 1 (GJB1)	1.0070225	1.2069869	1.1214769	0.5049021	1.059891	1.1459516	1.0789326	1.1173323	1.4825072	0.88370496	0.55586237	0.8631976	0.89455965
Aquaporin-3 (AQP3)	1.0444683	0.9918807	1.0231365	1.0032977	1.0755328	1.022884	0.86589007	0.83626395	0.78989165	1.1409945	1.402089	1.0903064	1.1309035
Myelin basic protein	0.88654214	0.8915825	0.8162658	0.8162658	1.018624	0.8306716	1.1977639	1.0288215	0.7495404	0.9200335	0.7823105	0.8478949	0.8478949
Calgranulin B3	0.9282232	0.94563305	0.89875513	0.89417917	1.1159426	0.8762768	0.71298134	0.81479215	0.87661655	1.082933	1.1790044	1.0412879	1.1086374

Table 30

Phase-1 RCT-196	0.7737887	0.80609363	0.9803593	0.8280314	1.0292563	1.0855339	1.0721052	1.2062861	1.0197809	0.8991171	0.83722305	0.98051465	0.7652895
Protease activator 28 alpha	0.8700965	0.8842359	0.97189367	1.2974045	0.7578311	0.80755854	1.1085005	0.6941042	0.88059264	1.2056191	1.2596633	1.1701913	1.2806515
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=ncr; necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 28)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint													
Compound-Dose (2)	HYD 250	HYD 250	ISON 200	ISON 200	ISON 200	ISON 50	ISON 50	ISON 50	ISON 50	KETO 20	KETO 20	KETO 20	KETO 80
	1228	1228	1957	1957	1957	1947	1948	1949	2227	2228	2228	2237	KETO 80
Liver Toxicity Inflammation Classification (4)													
Gene Name (5)													
Phase-1 RCT-107	0.92286339	0.9724697	1.1931278	1.0266343	1.0351357	1.0104604	1.0258583	1.1820931	0.6416078	1.0320272	1.1641893	0.75789845	1.0401232
Betaine homocysteine methyltransferase (BHMT)	0.9272843	0.75735576	1.8048418	1.1372718	0.8495852	1.1479098	1.0600139	0.7808873	1.0489192	0.5969826	1.5301702	1.5501614	1.8802859
Proliferating cell nuclear antigen gene	1.0001093	0.9472914	0.8763198	1.0670022	1.0278155	0.9705582	0.8651532	0.94811374	0.9418058	0.9683398	0.94412653	0.96083708	0.9178581
Cytochrome P450 2D18	0.7760595	0.76552684	1.3653011	1.0716951	0.8765324	1.0396953	1.0168697	1.1770697	0.7392199	1.3688108	0.9728657	0.81608525	0.9510157
Cytochrome P450 2C11	1.1643682	1.3231397	0.7627284	0.8395621	0.8831849	0.78251094	0.86158174	0.89599484	1.550108	0.7128838	1.3732378	1.2340543	1.4968
Phase-1 RCT-290	1.1610914	0.9130394	1.3805956	1.024619	0.96544725	0.9325769	1.051288	0.90455335	0.9617887	0.8914315	1.6769665	1.4707156	1.8079087
Phase-1 RCT-89	0.8980774	1.2447653	1.1796927	0.78156215	0.7875057	0.90309504	0.95408483	0.95408483	0.5582716	1.092706	1.2209697	1.0150378	0.9121893
Beta-actin, sequence 2	0.97377414	1.0412718	1.1354617	0.84801835	0.8001689	1.0977262	0.91908735	0.93961823	1.0802272	0.9463383	0.9986186	1.0283955	1.2068067
Phase-1 RCT-292	1.1023988	1.1535336	1.0012902	0.9479887	1.1120521	0.94046235	0.9894328	1.0398449	0.93003837	0.94595987	0.88044943	0.8413398	0.921587
Pyruvate kinase, muscle	1.0635214	0.89963528	0.741921	0.73109424	0.6376287	0.64756256	0.7689531	0.90721005	0.99457186	1.0039778	0.96073523	0.92228678	0.981008
Osteocalcin	1.2242782	1.0988606	1.2330841	1.157032	1.0941331	0.9679047	1.0258203	1.0818103	1.1729551	0.96979535	1.0082295	1.0059392	
Calgranulin B1	0.84304804	0.7848602	1.4415586	1.2128091	1.3378177	1.1589959	1.0879102	1.3417999	0.94875868	1.024401	1.2431078	1.1254856	1.0557357
Aradiprotein AII	0.8931565	0.5094268	1.7874542	1.3501084	1.0162449	0.75581783	0.8597209	0.9624983	1.06583	0.83966806	0.9513488	0.9939955	1.0165778
Connexin-32	1.0699158	1.2159017	1.3629888	1.04239161	0.9605675	1.4014689	1.5576108	1.2978588	0.7341641	1.036745	1.0891885	0.9635441	1.0178879
Phase-1 RCT-109	0.9411005	0.75447893	1.2314739	1.1811682	1.027188	1.0490971	1.0361731	1.1718973	0.9427115	0.8946068	0.8871577	0.92398316	0.8651074
Glycine methyltransferase	0.64758784	0.9352298	1.8639434	1.1439337	0.9867357	0.91996527	0.88699604	0.8872816	1.5330267	0.9902627	1.1802028	0.8897563	1.0768587
L-glutono-gamma-lactone oxidase	0.73315126	0.7853391	1.7897188	0.9691461	1.1560551	0.83481987	1.1051009	1.1931689	1.2216948	0.75444365	1.0553967	1.1527449	1.6593752
Phase-1 RCT-256	1.1369187	0.7033049	1.5456157	1.1018753	1.1688067	1.1170045	0.9463447	1.191083	1.1217816	0.9324768	1.2350627	1.1297058	1.2249868
Carbonic anhydrase III	0.94287896	0.99154093	0.46239161	0.3609514	0.6332722	0.6896189	0.2624356	1.0098848	0.7307593	0.9910834	1.21210622	1.7699786	
Phase-1 RCT-78	1.083253	1.0050827	0.8898785	1.0097878	0.9096597	1.022914	1.0905014	0.9615251	1.0681082	1.1640416	1.0239267	0.88123988	1.0582012
Urinary protein 2 precursor	0.9523318	0.8698847	0.8085947	0.7628869	0.72607887	0.7607808	0.815804	0.8028333	1.2283452	0.9108761	0.8065663	1.1302842	1.0251763
Insulin-like growth factor 1	0.79534104	0.77337414	1.0495982	0.7595914	0.8418566	0.8667726	0.8973891	0.9843528	1.3885748	0.7124481	0.9073932	1.2889586	1.0688842
Aryl sulfotransferase	0.7682665	0.6823414	1.1563323	0.93708466	0.7096842	0.7584294	0.769752	0.81847245	1.0082268	0.8600673	0.96433965	1.2145585	1.0984297
Phase-1 RCT-185	0.7807513	0.69875306	0.84927297	0.75920314	0.82691497	0.8307931	0.82489023	0.858102	1.146114	1.0600867	1.0456571	1.1211196	1.1017917
Cofilin	1.0956489	1.1438875	1.0554843	0.99723874	0.8518853	1.0301483	0.9227086	0.9106188	1.1469418	0.94548054	0.9915668	1.110541	1.0722455
Stathmin	1.0455275	1.1606138	0.954189	0.94826383	1.0049842	1.0471414	0.9203693	0.9764895	1.0357677	1.0036066	0.9932861	0.8886286	0.9606818
60S ribosomal protein L6	0.8989586	0.9935814	0.77152308	0.810666	0.81737614	0.8244418	0.8344173	0.83305193	1.1487308	1.0748465	0.8424394	1.0485139	0.92316204
Calpastin heavy chain	1.0554715	1.0851771	0.93090665	0.8336997	0.8508245	0.8461877	0.8057514	0.8689113	0.98518927	0.9288306	1.063261	1.0167865	1.0734273
Collagen type II	0.8416931	0.8022246	0.6748161	0.6951772	0.58130886	0.65145416	0.7143802	0.89403635	1.2328186	0.7511486	0.8523828	1.080308	0.8010714
Phase-1 RCT-179	0.9822825	0.99797878	0.9629175	0.859517	0.931183	0.9627153	0.9313591	0.949024	1.0972873	1.0647617	0.8997114	0.8990919	0.903918
Voltage-dependent anion channel 2 (Vdac2)	1.0423484	0.97299546	1.0689725	0.9760979	1.1326138	1.0424485	0.9891527	0.9927568	1.2119931	1.0756541	1.0999397	1.0738385	1.0942107
Phase-1 RCT-192	1.0432427	0.94700864	1.014138	0.95707816	0.8630659	0.88160005	0.9677834	0.9520295	1.3018655	0.9023318	0.8504744	1.0238671	0.8010121
Adenovirus nucleocapsid translocator 1	0.7068881	0.94534445	0.47064573	0.4621695	0.48199358	0.47289308	0.48687539	0.48030517	1.147787	0.85755543	0.923081	0.99120563	1.0200942
Thymosin beta-10	0.7723855	0.789062	0.459778	0.93031514	0.8290003	0.8504684	0.84719145	1.0671115	0.9174476	0.9673879	0.9273673	0.8716582	0.8310276
High affinity IgE receptor gamma chain (FcERlgamma)	1.1576936	1.1004955	0.8393566	1.0194733	1.0120776	0.8743846	0.888869	0.9021323	1.1363595	1.0432348	1.0214124	1.0686034	1.0528743
Gamma-actin, cytoplasmic	0.85605294	1.039812	0.9812564	0.7499938	0.8185252	1.1537331	1.0010753	0.7059606	0.8008093	0.8682188	0.76398284	0.9713873	1.248057
Uncoupling protein 2	1.1095238	0.9906051	1.0611308	1.0439843	0.9004821	1.0369588	1.0065987	1.1526485	0.8807271	1.0007331	0.9286529	0.84186916	0.8775904
Phase-1 RCT-34	1.2249824	0.86005166	0.938076	0.9687995	0.9634876	1.0201324	1.036255	0.8764805	1.0424504	0.9851233	0.93806463	1.0084438	1.2586462
Phase-1 RCT-31	1.2203081	1.0234023	1.0210528	0.9744128	1.058053	1.088377	0.98368814	1.0112945	1.408673	1.1313214	1.1830842	1.2358509	1.2602823
Cyclin D1	0.8371783	1.3274584	0.68569894	0.59979086	0.9200228	0.7035454	0.834072	1.14126	1.123014	0.7746915	0.8279488	1.080895	1.101482
IgE binding protein	1.1946119	1.0742308	0.87703	0.9575553	0.8876343	0.857668	0.8568784	0.9134148	1.0012897	1.0960099	1.1123488	1.0677552	1.0173423
Zinc finger protein	1.0335448	1.620849	1.0335797	0.955715	0.97801733	1.0489175	0.9655274	0.9345885	0.892892	1.2830791	0.9041849	0.857518	0.8497521
Phase-1 RCT-138	1.056592	1.0845968	1.109831	1.0748842	1.026527	0.9251018	0.860284	0.9476534	0.98860934	1.0006538	0.9914349	1.0106298	0.92748955
Alpha-tubulin	0.79030246	0.99473818	0.88737634	0.6681554	0.7486613	0.75839555	0.87659734	0.8201845	0.8659389	0.8346816	0.83148078	0.988404	1.1238892
Alpha-phosphorylase	0.98340175	1.0737407	0.8073056	0.8766108	0.71014875	1.0921605	0.84124357	0.86984648	1.1920507	0.8250034	0.93345328	1.0802723	1.0084984
Calpain 2	1.1024749	0.96840359	0.8588175	0.69979076	0.98607298	0.9354279	0.830868	0.9250379	1.005541	1.0074108	1.0113428	0.97409713	0.9683036
Phase-1 RCT-12	1.1789008	1.0064638	1.2898413	1.0430565	1.1001389	1.0749242	1.1058698	1.1732201	0.92846096	0.8784984	0.9602124	0.9017628	1.0320802
Cathepsin B	0.8863336	0.85729915	0.9089176	1.1465163	0.83622706	0.968678	0.9188795	0.8878062	0.9885576	0.98816016	0.88592048	0.8679422	1.0320802
Phase-1 RCT-24	1.0492853	0.97400105	1.417487	1.049154	1.085146	1.0580435	1.3424087	1.1582974	1.1246889	0.7630836	0.84425545	1.0721177	1.2694421
Melanoma-associated antigen ME491	1.0918578	1.1615111	0.8710998	1.0608941	0.8780127	0.94800436	0.85708666	1.1711934	0.9610675	1.0187886	1.1822474	1.043293	0.9894872

Table 30

Phase-1 RCT-58	1.1457831	1.1326951	1.0553864	1.0612122	1.1094847	1.0234134	1.0023066	1.0445464	1.0570312	1.0127146	0.9530968	1.0354431
Cyclin G	0.9557893	1.8044132	0.8288854	0.8080923	0.8587892	0.9482344	0.9256672	0.8607363	1.0554134	1.002724	0.9358663	0.9575905
Hypoxanthine-guanine phosphoribosyltransferase	0.93359065	0.9972337	1.009886	0.9023998	0.8660803	0.8997777	0.8617707	0.838232	0.9298717	1.091909	1.0387038	1.0728174
Tissue inhibitor of metalloproteinases-1	1.0555102	0.938503	0.80610635	0.89252955	0.950938	0.9467795	0.87398204	0.98894864	1.0804644	0.9654701	1.000822	0.96509764
ID-1	0.91413146	0.9573936	0.92477653	0.90341585	1.0175658	0.87468955	0.80725804	0.89525804	0.9001629	0.9071687	0.8473002	0.84334445
Ribosomal protein S9	0.92808816	1.0046872	0.8050262	0.84231657	0.8123567	0.8104892	0.8104892	0.8104892	1.066633	1.066633	0.9508739	1.1176602
Hemic oxygenase	1.3539224	1.1699336	0.7814852	0.82020584	0.8778708	0.8047046	0.8778708	0.8047046	1.0647652	1.0647652	1.0163479	0.803906
Ribosomal protein S8	1.0336319	0.77654797	0.92598668	0.7663433	0.8520291	0.88942835	0.75981057	0.8636594	1.1908447	1.0642874	0.8012668	1.0678409
Ribosomal protein S17	1.1602547	0.94436205	1.012943	0.8993863	0.87818955	0.9332551	0.84847858	0.8355953	1.1353065	1.1703508	0.8701048	0.85656025
Nucleoside diphosphate kinase beta isoform	0.95483506	0.9441183	1.0934058	1.0640682	1.0173595	0.9999407	0.9999407	0.9999407	0.8725343	1.025658	1.0435872	1.0018204
Phase-1 RCT-121	1.1990191	1.2677963	0.9448252	1.0323154	0.9398453	0.98994464	0.98471719	0.90462473	1.1740684	0.8725343	1.025658	1.0018204
14-3-3 zeta	0.93471634	0.7359732	0.95117635	0.85851187	1.0078478	1.0025038	0.87398204	0.90200293	1.1647095	1.0906253	0.90178274	0.99430054
60S ribosomal protein L6 (alternate clone 1)	0.9951622	0.78815933	0.9736074	0.85851187	1.0078478	1.0025038	0.87398204	0.90200293	1.1647095	1.0906253	0.90178274	0.99430054
Beta-tubulin, class I	1.228412	0.85614934	1.5913781	0.8574254	0.9525975	1.1443376	1.3345822	1.064784	1.1831266	0.73178228	0.80482703	1.201948
Organic cation transporter 3	0.82342967	0.9669904	0.8637668	0.8576639	0.8247593	0.9058525	0.9200178	0.9386762	1.1333398	0.88089546	0.79154074	0.9387722
Calreticulin	0.87748337	0.74697304	0.82910927	0.4605782	0.4605782	0.4605782	0.4605782	0.4605782	0.8654687	0.79154074	0.9387722	1.287839
Glucuronidase	1.0694534	1.1122338	1.0203092	1.0208349	1.0866367	1.059083	0.8349744	0.9461063	0.91387584	0.9466568	0.90602098	1.0471783
Phase-1 RCT-154	1.1584938	1.0821053	1.2451885	1.0335827	1.1074816	1.019525	0.9833005	1.021227	1.0685546	1.0148282	0.8509297	1.0831414
Phase-1 RCT-283	1.1589872	1.1019789	0.79167145	0.8300282	0.8399776	0.7238581	0.731563	0.8844661	1.0601149	0.9782187	0.97028326	1.033324
Annexin V	0.81089285	0.9115061	0.7916028	0.7947308	0.80208165	0.8947883	0.85258925	0.86230683	1.2892718	0.9431049	0.76199424	1.1271278
Complement factor I (CFI)	1.1287588	0.9527894	0.8749739	0.9623108	0.9070067	0.9880918	0.908288	0.93868283	1.0352032	1.0632417	0.7618694	0.87330207
Phase-1 RCT-276	1.078148	1.1735798	0.984979	0.9448814	0.9787228	0.9639184	0.955602	0.93848664	1.0178839	1.0832926	1.0003814	0.9360373
Tyrosine aminotransferase	1.0081086	1.845187	0.82441723	0.50107473	0.8231771	0.93430267	0.8157536	0.91681457	1.480053	1.0404547	0.8643437	1.1193905
Glutathione peroxidase	1.1648842	0.67515457	1.3031887	1.1092184	1.4454928	1.1001378	1.1346011	0.70111896	1.0520865	0.88142914	0.808009	0.8147712
Histidine-rich glycoprotein	0.8504877	1.0941741	1.3701631	0.8654027	0.77418756	0.7633041	0.8549006	0.91681457	1.2539189	0.89169174	0.76546074	0.81573784
Carbonic anhydrase III, sequence 2	0.8281089	1.1515921	1.3362929	0.8654027	0.77418756	0.7633041	0.8549006	0.91681457	1.2539189	0.89169174	0.76546074	0.81573784
Phase-1 RCT-402	0.8675798	1.0391566	1.1272777	0.8922087	0.9309417	0.9440785	0.86716252	0.8771788	1.2925958	0.9288878	1.0295312	2.0853417
Transitional endoplasmic reticulum ATPase	1.1444913	1.1912084	0.7803443	0.8343568	0.92425847	0.9817854	0.83363198	0.9813055	0.8008858	0.9288878	0.8757679	0.9129844
Phase-1 RCT-48	1.0759416	1.2034101	1.0634059	0.9698961	0.93444335	0.9817854	0.83363198	0.9813055	1.1427572	0.8877189	0.81976804	1.0203118
Phase-1 RCT-268	0.9569738	0.8582792	1.0267756	1.0127369	1.0317634	0.9034109	1.4876276	0.8330714	1.1312673	0.8086988	0.8865862	1.2118234
Phase-1 RCT-181	1.0945604	1.0139138	0.819258	0.7258421	0.9149855	0.8790864	0.7428916	0.7055183	0.90018168	0.7632381	1.070837	0.8627537
Glutathione S-transferase theta-1	0.878427	0.9647585	0.99149543	0.9041769	0.8698092	0.92532897	0.8431193	0.7814709	0.87839603	0.4983657	0.8568317	0.85782213
Phase-1 RCT-168	1.1421751	1.188279	0.9413164	0.9202335	0.93845116	1.0177329	1.1125828	1.1173744	1.167755	0.90411103	0.92953339	0.8598128
ANK1 stress activated protein kinase	0.84730893	1.0397701	0.7631731	0.8429429	0.81632475	0.974403	0.9341255	0.7731097	0.7731283	1.0795687	0.76082128	0.948823
Phase-1 RCT-81	1.01132449	1.1132449	1.2010179	0.907395	1.0455397	1.510758	1.039885	0.8600444	0.9553724	0.9236269	1.0434995	1.0574105
Phase-1 RCT-33	0.8868898	0.87396553	1.5780809	1.1403052	1.0328668	0.87107136	1.0277582	0.7743907	1.0603262	1.0843357	0.9960311	1.0110186
Phase-1 RCT-178	0.8698805	0.743406	1.1819186	0.9912769	1.2074548	0.8738844	1.0929282	0.97473294	1.0611541	0.8695908	0.8611659	0.81488654
Apolipoprotein CII	0.93274556	0.93514863	0.90710926	0.9039609	0.7653512	0.86707834	0.7750191	0.85043994	1.074739	1.1074739	1.3920227	1.0122828
Phase-1 RCT-48	1.167826	1.1131845	0.9369403	1.009007	1.0517182	1.007516	0.8983808	0.9800897	0.9841011	0.966181	1.0519491	0.9880711
NADH-cytochrome b5 reductase	1.192851	1.0219376	1.2048682	0.905277	0.7384718	0.8268973	1.0780107	0.98130514	0.9148288	0.8594424	1.1180658	1.0521331
Alpha 1-inhibitor III	0.94284827	0.9059076	0.81277592	0.88796824	0.8052716	0.8402171	0.89347726	0.74718894	0.82563776	0.8061589	0.78118596	0.91631407
Phase-1 RCT-223	1.4078891	1.2812454	1.0760541	1.0698046	0.86077087	0.8382201	0.96888277	1.0244256	1.0854434	0.9147325	0.97584393	0.9465771
Paraoxonase 1	1.0020653	0.8660514	0.87597055	0.8506668	0.81224145	0.707365	0.67923373	0.62585284	1.1025195	1.0417895	0.8626515	1.0941684
Presenilin-1	0.88718935	0.9206028	0.3221889	0.833553	0.79136246	0.8811215	0.8911779	0.78493577	0.9684903	1.0257176	0.82493518	0.97303164
Apolipoprotein C1	0.8825861	1.189885	0.823021	0.94326437	0.74086764	0.70633733	0.7624822	0.8328909	1.0450132	1.2968476	0.8815001	0.87634206
Cytochrome P450 2C23	0.8814393	0.9555458	0.88107175	0.8373009	0.86888256	0.93968724	0.93668046	0.70145744	0.9639448	1.111025	0.8322894	0.89465625
Phase-1 RCT-227	1.1679405	1.0021831	0.7931948	0.8448278	0.74417263	0.8452017	0.8879592	0.76488924	1.1789032	1.5770384	0.9449782	0.97578816
Hepatic lipase	0.7865629	0.9366526	0.60592514	0.66033167	0.66033167	0.7850535	0.79254097	0.6921786	1.1251222	0.9979703	1.0430275	0.89258894
Phase-1 RCT-164	0.8532849	1.0821102	1.0977409	1.047536	1.0390987	1.0663508	1.0613997	1.1685184	1.0252593	0.9875138	1.0063412	0.9972071
Multidrug resistant protein-2	0.8116767	0.72092265	0.8308033	1.164813	0.8513398	1.0369532	1.0207151	0.8955845	0.9431806	0.8054094	0.83145714	0.7782268
Insulin-like growth factor I, exon 6	0.75646245	0.862009	1.2535802	0.91945078	1.0073384	1.0590205	1.0082982	1.3877352	0.833457	1.000597	1.0401657	1.1763397
N-hydroxy-2-acetylaminothiurene sulfinatase (STAC1)	0.9083827	0.88048	0.82286	0.6327095	0.7273149	0.72810525	0.44323933	0.88878417	1.0650699	0.8535993	0.8776529	1.0590894
Dynamin-1 (D100)	1.163745	1.0504559	0.96143854	0.9937413	0.98861444	1.0112592	1.0924703	0.9805565	0.97484094	1.0724361	0.9588119	1.058654
DNA polymerase beta	0.8368895	1.0333169	0.9122549	0.8274892	0.8724851	0.89386113	0.79786307	0.86889438	1.2258183	0.90412118	1.0724361	1.076165

Table 30

Phase-1 RCT-173	0.9256698	0.97009766	0.9898964	1.0957845	0.95501757	1.0300466	0.8508195	1.081977	0.7318827	1.1358281	0.9540911	0.9824165	1.084028
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.8526225	1.036951	0.8187173	0.9174989	0.91167705	0.97316235	0.9697661	1.0050668	1.0776992	1.0538942	0.8922252	1.0918648	0.91699594
Ribosomal protein L13A	0.9153389	0.71342987	1.2782404	1.1156323	1.0607251	1.0341544	1.0563001	1.1029173	0.95538335	1.0579709	0.8607310	0.87151265	0.8388116
Phase-1 RCT-144	1.2078208	1.1315463	0.8841462	0.8861183	1.0560048	0.9422835	1.3527382	0.9998572	1.1852355	0.9898572	0.8862852	0.9659824	0.94501215
C-H-ras	0.8523228	0.70270294	1.2842847	1.1323174	1.1557741	1.1694304	1.1792024	1.1464808	0.9804145	1.063653	0.8519004	0.97782	0.90664244
Vesicular monoamine transporter (VMAT)	1.3577291	1.1073003	0.8866185	0.98026	0.9596957	1.014851	1.1870204	1.1398098	1.0171847	1.1911689	1.0171684	1.0380023	0.9717845
Phase-1 RCT-273	1.2482009	0.4633983	0.9855843	1.0303439	0.9589427	1.0142138	1.0191325	1.0514371	0.8055237	1.2301352	1.1621027	1.0389163	0.98304266
Phase-1 RCT-230	1.1980086	0.984104	1.116379	1.1287479	1.0963312	0.978692	1.0827714	1.0283988	0.9854005	1.0905281	1.1512678	1.0514365	1.0404875
Phase-1 RCT-74	1.2256181	0.8811804	1.0379945	1.0395913	1.0739472	1.0010178	1.0240707	1.0681988	0.9604126	1.0905281	1.1512678	1.0514365	1.0404875
Phase-1 RCT-80	1.1734665	1.0482282	0.972923	1.0557682	1.0983976	1.0076007	1.0682748	1.2031457	0.8912897	1.1380451	1.0768317	1.0772716	1.0128786
Phase-1 RCT-158	1.2110095	1.2489781	0.9054163	0.98963576	1.0169151	0.98455004	0.9600314	0.9539014	0.8315605	1.1345698	0.9659153	0.9174224	0.8537157
Decoyctidine kinase	1.4005208	0.196227	0.9107285	1.1015781	1.1610999	0.9148485	1.0212991	1.0182487	0.9200802	0.9892596	0.90532595	0.87801674	0.7626121
Inositol polyphosphate multikinase (Ipmlp)	1.0365821	0.98569508	0.97408104	1.0404269	1.0294106	0.9485223	1.0282874	1.020483	0.96	0.9898908	1.2326644	1.070872	0.7238128
Neuronal cell adhesion molecule (NCAM)	0.98397534	0.93811824	1.0275081	1.244836	1.0822332	1.1309347	1.4707489	0.9949786	0.7605791	1.149704	1.149078	0.9426335	0.982868
Hepatocyte growth factor receptor	1.0071803	0.95777464	1.0847012	1.1724561	1.2791624	1.0966933	1.1082498	1.0523983	0.8240544	1.1471714	1.1250255	0.882982	0.96512425
Empty	1.3164663	1.0513295	0.97034454	1.0615968	1.0994933	0.96923433	1.1082498	1.0523983	0.8240544	1.1471714	1.1250255	0.882982	0.96512425
Dopamine receptor D2	0.9735164	0.97997683	0.98636675	1.1028165	1.0340681	1.0216401	1.197543	0.9805276	1.2202303	0.9821112	1.0354171	1.1020715	1.1287442
Phase-1 RCT-51	1.385544	1.2340824	1.0846267	1.093361	1.0603758	1.0246074	1.1387382	1.0283488	0.96631354	1.0017758	1.0927024	1.0223778	1.0533367
Four repeat ion channel	1.237428	1.118857	1.032265	0.9721688	1.0464317	0.9850679	1.0506659	1.0423351	0.89754905	1.1731018	1.0768412	0.94351065	0.93401325
Adrenomedullin	1.5238719	1.1397445	1.0016323	1.1480233	1.1131228	1.0471852	1.2060228	1.2338146	0.8778893	1.3921438	1.409295	1.1051658	0.84493023
Caveolin-3	1.182052	1.0349427	0.92878675	0.95917845	0.9455404	0.9008501	0.97697484	1.0108513	0.839822	1.0947324	1.1338968	0.9459022	1.0549743
Phase-1 RCT-129	1.1682869	1.01828	1.0806021	0.97900014	0.8946934	0.9789132	1.0313575	1.0880543	0.84073555	1.0931797	1.1867175	1.0971838	1.0114973
Phase-1 RCT-64	1.1638447	1.183551	1.3827659	1.4744184	1.2500349	1.1885789	1.1776295	1.1771768	0.8887809	1.140481	0.9680022	0.91015756	0.9815994
Sarcoplasmic reticulum calcium ATPase	1.0424198	1.0811398	0.8161457	0.8651067	0.8474566	0.8393735	0.9803028	0.9483767	0.8818173	1.0511432	0.99600315	1.0052936	1.0280753
Phase-1 RCT-79	1.2373827	1.0220457	1.08855	1.0817768	1.0752407	1.0025477	1.0640537	1.007478	0.9953311	1.0783992	1.1033069	1.0857148	1.0502165
Phase-1 RCT-262	0.0457062	1.1593858	1.2489168	1.132546	1.1343902	1.0516288	1.0650081	1.0795904	1.131471	1.1859007	1.1147147	0.97352415	1.0538994
Phase-1 RCT-151	0.94124436	1.0289825	1.0702791	0.8763523	0.83441865	1.0409198	0.94550188	0.9539296	0.9594015	0.8976206	1.0476089	0.98728904	1.0896717
Phase-1 RCT-70	1.0777615	0.976214	1.10157	1.0728228	1.044673	1.0572181	1.0397488	1.0693818	0.9693818	0.9922894	1.3118588	0.8795832	1.3330436
Phase-1 RCT-150	1.1877885	1.1128681	1.3827659	1.4744184	1.2500349	1.1885789	1.1776295	1.1771768	0.8887809	1.140481	0.9680022	0.91015756	0.9815994
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.1503277	1.181435	1.4253153	1.0515465	0.9803257	1.0431283	1.1160212	1.1659031	0.86423457	2.0831847	0.8504773	0.8876423	0.9043651
Phase-1 RCT-119	1.2856392	1.1534467	1.0692038	1.1123033	1.100944	1.0226914	1.1038182	1.0029286	1.0661698	1.2688695	1.1857121	1.0300233	1.283224
Pentoxifylline 3-ketoreductase	0.82117605	0.80708694	1.1354029	1.2043141	1.1186744	1.2886836	1.1036228	1.3057339	0.9171656	1.0702373	1.0818802	1.040308	0.9855904
Phase-1 RCT-146	1.4474351	1.4390094	0.9189855	0.9910388	1.0510613	1.0046166	1.0213748	1.0009739	0.9230637	1.054278	1.0088149	1.0845592	0.981095
Superoxide dismutase Mn	0.9446938	0.807842	1.4188879	1.028524	1.2205307	1.1197699	1.0768789	1.1350104	1.1116402	1.0323654	1.0161247	0.9709012	1.0361359
Phase-1 RCT-116	1.2668917	1.0473993	1.1028868	1.1539742	1.1811925	1.1408703	1.1622536	1.1188978	0.70662828	1.0805992	1.1213825	1.0542838	0.9670416
Alpha-1 microglobulin/ikilinin precursor (Amlp)	1.0114069	0.95763765	0.9742202	0.9395652	0.903801	1.0374234	0.8097115	0.9424318	1.1227962	1.0573705	0.966149	1.0744889	1.0001813
Phase-1 RCT-18	1.0915126	1.0348438	1.0204103	0.9894295	1.0363389	0.9824033	1.0130593	1.0408069	0.9980239	1.008132	1.0330995	0.94380087	0.98404095
Masspin	1.3348398	1.0943972	0.9486434	1.0801109	1.0471873	0.9848814	1.1254734	1.0565989	0.8577701	1.1742934	1.1056011	1.049484	0.9181093
Decorin	1.3143756	1.0050756	0.5047364	0.5625447	0.8224971	0.52818614	0.54028884	0.6758401	0.8091883	1.2671516	1.1246088	0.970209	0.9094235
Retinoid X receptor alpha	0.81201833	0.7956547	1.0102285	1.103093	1.0964313	1.0700383	1.1687895	1.1043088	0.8431868	0.95001113	1.0220878	0.864001	0.9706469
Cellular nucleic acid binding protein (CNBP)	0.8027088	0.8188231	0.8325287	0.72232753	0.7907036	0.76523803	0.74786776	0.8000132	1.0316854	0.9295343	0.8934838	0.8949008	1.0246934
NADPH cytochrome P450 oxidoreductase	0.894586	0.83724797	1.488397	1.3536533	1.2210888	1.4022211	1.6890288	1.3055189	0.760504	1.171578	1.1249125	0.9905728	1.0957007
Malic enzyme	1.2600842	1.1720154	0.8465513	0.91543573	1.0422187	0.968275	1.3543574	0.8326716	1.3300122	0.61323154	1.2905203	1.1307508	1.1531081
Caspase 1	1.2244496	1.2188511	0.8704605	1.0484989	1.0549728	0.99764057	1.030336	0.9419173	0.93951154	0.96503204	0.9520919	0.87521476	1.1066992
Cystatin C	1.1459326	1.0246291	0.8879881	0.8251435	0.85179955	0.8704144	0.7028129	0.90473396	0.9923728	0.9927725	0.8428884	1.008019	0.9143028
p53/CDC	0.839082	0.8595532	0.8571033	1.0502167	1.1131505	1.093559	1.0924687	1.0393854	0.7004584	0.9875785	0.92990476	1.0152817	0.8444423
Poly(ADP-ribose) polymerase	1.0731474	1.0832843	0.98840204	0.9887846	0.98704803	1.060549	1.0054617	0.9130834	0.90565084	0.9197858	0.9991729	1.0011454	1.0294118
Tissue plasminogen activator	1.1202401	1.0566278	1.0397718	0.9864039	0.99932224	0.9744875	0.9928303	1.0137887	1.0537682	0.9543054	1.0671182	1.0410353	1.0798928
Multidrug resistant protein-1	0.7876397	0.8503421	0.9518975	0.9714757	1.1281227	0.91769393	1.0657707	0.486104	0.4635768	1.036282	1.1036029	0.833957	0.8473235
Phase-1 RCT-207	0.99106245	1.0285404	0.9452741	0.8719889	0.8800488	0.83275267	0.8542062	0.9852722	0.9009885	1.0690686	0.96978045	0.8851261	0.9768459
Phase-1 RCT-181	0.9884897	1.0190814	1.4127065	1.0719204	1.0840953	1.1825291	1.3157303	1.0776811	0.9923086	0.9852884	0.8542957	1.0564018	0.9858041
Gap junction membrane channel protein beta 1 (Gjb1)	0.9741323	0.77976716	0.2783278	1.4940429	0.9713863	1.1271746	1.6836606	1.573117	0.7520676	1.2235538	1.5970058	0.8168648	1.45217
Aquaporin-3 (AQP3)	1.300238	1.1355637	0.888746	1.0280287	0.92815304	0.92815304	0.90899074	0.92183554	0.9837914	0.9668083	1.0026027	0.9955408	1.0201402
Myelin basic protein	0.82115954	0.82259727	1.177894	0.82259727	0.80037796	1.148134	0.76206666	0.9037796	0.83939717	0.81371695	0.9397137	0.83939717	0.83939717
Calgranulin B3	0.97203416	1.2430894	0.98447107	0.94548235	0.96070373	1.0578875	0.9639002	0.9488586	0.97669186	1.034677	0.9556306	1.0234357	1.0266551

Table 30

Phase-1 RCT-156	0.9743834	0.97000634	1.0422528	0.9607407	0.92531216	0.8820789	0.92366104	0.9336618	0.9608464	0.95014036	0.9285223	0.93055945	0.84998455
Protease activator 28 alpha	1.2557881	1.1518234	0.6509741	0.55945995	0.7278985	0.78140306	0.7106207	0.6948155	0.98500973	0.8277978	0.8208424	1.0101173	0.9289862
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 hr: yes=recr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive genes (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint													
Compound-Dose (2)	Animal Number (3)	Liver Toxicity Inflammation Classification (4)	Gene Name (5)	Timepoint									
				LPS 2	LPS 2	LPS 2	MEI 5	NAL 180	NAL 180	NAL 45	NAL 45	NAL 45	PBAR 20
Gene Name (5)	Animal Number (3)	Liver Toxicity Inflammation Classification (4)	Gene Name (5)	no	no	no	no	no	no	no	no	no	no
				no	no	no	no	no	no	no	no	no	no
Phase-1 RCT-107	0.77611244	0.86592567	1.5975018	1.310598	1.094159	0.94420564	0.92431847	1.1764398	0.8031692	0.8033006	0.8033006	1.6978345	1.0028846
Beta1a homocysteine methyltransferase (BMT)	1.27551	1.405062	1.3421005	1.282184	0.576084	1.1963247	1.5138712	2.469419	1.4516473	1.0031781	1.0838253	3.905292	2.6158793
Profilin cell nuclear antigen gene	0.9963327	0.783694	1.2030548	0.8617404	1.8337628	1.0750554	0.8811896	0.8534624	0.9251331	0.8663851	0.7787287	1.1472781	1.1526983
Cytochrome P450 2D18	0.7026509	0.84023585	1.290407	1.0045012	0.85450006	1.0298556	0.8051332	1.1265297	1.131692	1.1131692	1.1370409	1.3706409	1.1956983
Cytochrome P450 2C11	1.2769942	0.9747287	1.0719385	1.2418213	0.733187	1.0194313	0.9457214	0.8573385	0.7637638	0.8299484	0.8704967	0.9957395	0.8060056
Phase-1 RCT-290	1.2459372	1.213754	1.1844711	1.1382359	0.9400855	1.0823638	1.225132	1.4778811	1.0695183	1.3822116	1.029977	1.0831784	1.8948996
Phase-1 RCT-59	1.1382359	0.9400855	1.0823638	1.1628749	0.94103867	0.96268834	1.0555532	1.0572877	0.9350263	0.88797474	0.8559063	1.8948996	1.8948996
Beta-actin, sequence 2	1.0294846	1.2831661	1.4419211	0.81849548	0.68450534	0.8963114	1.2186803	1.3021172	1.1715635	0.907416	0.9617327	1.1109042	1.2332952
Phase-1 RCT-292	1.0440986	0.8189843	0.8924822	1.0955169	0.9876942	1.0615066	1.0588416	1.15737	0.986367	0.9278045	0.9848497	1.217015	1.1697378
Pyruvate kinase, muscle	0.9397318	0.9281352	1.1484793	1.0003225	1.037163	1.0201123	1.0588416	1.0495372	1.1426627	1.0278794	1.0011768	1.007005	1.007005
Osteocalcin	0.97043985	1.1498738	1.1109719	1.073597	0.8607398	0.9489654	1.0886238	0.9490656	0.9978531	0.9147682	0.98913564	1.1000055	1.0748872
Calgranulin B1	1.221727	1.1237944	1.3507557	0.89041394	0.9108857	0.8845449	0.8745469	0.9468753	0.8478723	0.8478723	0.8478723	1.1971053	1.1971053
Apolipoprotein AII	0.8444051	1.253373	2.985982	0.7418725	0.39403008	0.6806653	0.6025305	1.1117367	0.5854952	0.6310688	0.8620002	1.3497358	1.1971053
Connexin-32	1.116451	1.0478366	1.1724441	1.0640237	1.038747	0.91740555	0.91740555	1.1117367	0.5854952	0.6310688	0.8620002	1.3497358	1.1971053
Phase-1 RCT-109	0.8265656	1.3273343	1.5531783	1.0129572	0.78416854	0.99913245	0.97060156	0.9787259	0.9542577	0.9944954	0.8818392	0.8921556	0.9266085
Glycine methyltransferase	0.81405957	0.3518638	2.5284402	1.068808	0.9882745	0.905613	0.7578993	1.4146914	0.7542598	1.064379	0.83615264	2.4705284	1.1701493
L-glutono-gamma-lactone oxidase	0.9929116	0.99574655	1.2408891	0.906205	0.9866278	1.2316455	1.3842071	1.4790386	1.2074089	1.430553	1.0489926	1.1653014	1.283615
Phase-1 RCT-256	0.8963697	1.224038	1.4841218	0.9492805	0.7052431	1.057889	1.2647796	1.1706291	1.7176924	1.383605	1.1376109	1.4763999	1.6078495
Carbonic anhydrase III	1.0903949	0.5383712	1.4875015	0.7744769	0.6823454	1.0958087	1.0339024	1.393094	1.2268669	0.9361455	1.1376109	1.4763999	1.6078495
Unimyl protein 2 precursor	1.0116067	0.99130625	0.7771417	0.7648003	0.86538734	1.0002902	1.0339024	1.393094	1.2268669	0.9361455	1.1376109	1.4763999	1.6078495
Insulin-like growth factor 1	0.939848	2.222958	1.0671029	0.92101836	0.35709143	1.0183384	0.9484351	0.92198807	1.001531	1.1629932	1.2108288	1.1052854	1.3137918
ADL sulfotransferase	1.0686615	0.1992724	0.8220709	0.7748004	0.8526367	1.0353371	0.82983606	1.3047029	1.2433594	1.0684092	1.2108288	1.1052854	1.3137918
Phase-1 RCT-185	0.77017584	1.0665056	1.10846	0.9425279	0.83247095	1.1731498	1.0158004	1.816462	1.169013	1.1629932	1.2108288	1.1052854	1.3137918
Confin	0.8483712	1.9025789	0.8378099	0.92367095	0.7208132	1.188813	1.2071902	1.3260821	1.2895423	1.1494666	1.2027344	1.6806355	1.1518876
Stathmin	0.83100724	1.5354941	0.8782519	1.0044409	0.8003139	1.2554589	1.26334393	1.1867094	1.2091295	1.0720121	0.9592175	1.3134465	1.3722604
60S ribosomal protein L8	1.1128814	0.9287383	1.133521	1.0191717	0.93191797	1.0876484	0.9290006	0.94697803	0.8065004	0.8712027	0.9386542	0.8712668	0.82404525
Calpactin heavy chain	0.8118853	1.2531455	1.1330762	1.0547687	0.8559551	1.1662616	1.2098117	0.93617684	1.0567038	1.1267233	1.1853625	1.0748744	1.0324316
Calpactin type II	1.0966058	1.0108827	0.9878622	1.1768284	1.1688265	1.0534219	1.1231315	0.9713988	1.0355558	0.9976986	1.0375831	0.97733474	1.0715024
Collagen type I	1.2397212	0.73756415	0.8323457	1.3210883	1.7413026	0.8507482	0.81962615	0.7320131	0.68719648	0.7493977	0.7614648	0.8930218	0.7715024
Phase-1 RCT-179	0.82558376	1.1276072	1.0281196	0.77198984	0.9217617	0.867619	1.0041824	1.0788935	1.0633689	1.0535689	1.114375	0.93894243	0.9013762
Voltage-dependent anion channel 2 (Vdac2)	1.0732532	1.3107479	1.04514	0.8641837	0.8099895	0.9435917	1.1651349	1.2287755	1.0613744	0.90306103	0.965371	0.89779209	0.9276252
Phase-1 RCT-192	0.84116384	0.8486555	0.95282155	1.0258162	0.8428556	0.9880742	0.9809907	0.702768	0.90306103	0.965371	0.89779209	0.9276252	1.1605604
Thymosin beta-10	0.91587585	0.8362757	0.84735746	0.85709	0.9250249	0.8480772	0.8542812	0.70283045	0.768063	1.0036772	1.008284	0.9183638	0.84905108
Alpha-nucleotide translocator 1	0.99822486	1.3545974	1.3242525	1.1440005	0.8060537	1.0216744	1.005081	0.82067845	1.0036772	1.008284	0.9183638	0.84905108	0.84905108
High affinity IgE receptor gamma chain (FcER1gamma)	1.118954	1.5133718	0.8459187	1.1438844	0.79926574	0.86334875	1.0695501	1.0565835	1.1030726	1.0705086	1.0251201	0.8597281	1.0188884
Gamma-actin, cytoplasmic	1.0352285	1.009393	0.47806892	0.76944454	1.112652	0.7173407	1.1920035	1.3937043	0.95825646	0.7671651	0.7689878	0.9244225	0.98588735
Uncoupling protein 2	0.963997	1.1124845	1.1466894	1.286668	1.123848	0.90035	1.141488	0.85636073	0.904999	0.9193889	0.8503577	0.8432796	0.81579723
Phase-1 RCT-34	1.0247172	0.90851448	0.9998975	0.7883147	1.4250698	0.8232332	0.8727589	1.034958	0.8104764	0.8702003	0.83522864	1.1289131	1.2096716
Phase-1 RCT-31	0.82939297	1.5882298	0.89414537	0.6957013	1.0433682	1.0784869	1.340565	1.2603043	1.226035	0.908099	1.0208461	2.2375855	2.870828
Cytin D1	1.1195472	0.7396634	1.4721022	0.59383818	0.855716	1.2570727	1.164803	0.7293428	1.2139559	1.0504048	1.1342887	0.7326468	0.76686874
IgE binding protein	1.2154007	1.2628712	1.2220969	1.3836443	0.8553076	0.8255485	0.8463424	0.90282893	0.8920017	0.9546704	0.8958375	0.9854349	1.0450815
Zinc finger protein	0.9576428	0.83430934	1.0878098	0.9188789	0.9165594	0.9849859	1.1685404	0.90033305	0.854284	0.9432362	1.057773	0.8983357	1.0073564
Phase-1 RCT-138	0.92573506	1.0698821	1.1306904	1.2640575	0.89116415	1.1222728	1.050518	1.2293394	1.0084604	1.005467	0.8998099	1.2918228	1.2019229
Alpha-tubulin	0.9830285	0.7473927	0.91842175	0.81680385	1.3741191	1.2376714	1.2658547	0.9009393	1.1181638	1.4371778	1.2269413	0.79046243	0.7637493
Alpha-methylomycin	1.0400812	1.4921767	0.84088103	1.0116924	0.9907947	1.0093716	1.3827416	1.4598745	1.3084159	1.0476112	1.1445888	1.8149164	1.8326578
Cellpactin 2	1.0820388	1.1055788	0.9621458	0.702702	0.9466316	1.0783945	0.9620001	0.9405503	1.019475	0.93681126	0.9593126	1.050298	1.0285953
Cellpactin 1	1.0843618	1.2625579	1.074201	0.9287852	1.0443088	1.0594181	0.9694181	0.9156881	0.930748	0.9383669	0.88144216	0.88277806	0.8925366
Cellpactin B	0.84119093	1.253339	0.98812163	0.9818204	1.185339	0.9264547	0.9620001	1.3059382	1.1550395	1.142342	1.103397	1.1585854	1.3070632
Phase-1 RCT-24	1.1398975	1.1875793	0.86187404	0.8646196	1.1443762	0.9241459	0.8431504	0.76480156	0.8488769	0.9308466	0.8957918	0.8518995	1.30715715
Melanoma-associated antigen ME491	1.0623997	0.9855518	1.1614159	1.1374	1.1153917	0.9306477	1.0324688	0.9041084	1.0218906	0.8816287	1.3411556	0.8442448	0.8755925

Table 30

Phase-1 RCT-88	0.9559874	1.0540302	1.0231626	1.0812482	1.0751817	0.9742795	1.037108	0.98301213	1.0307157	1.0123672	1.0937538	0.85023785	0.918113
Cyclin G	1.2532041	0.760813	1.0311993	0.9900767	1.5553488	1.1315028	0.90780707	1.8564176	1.0363377	1.0363377	0.9167758	0.9701449	0.8977848
Hypoxanthine-guanine phosphoribosyltransferase	0.9862528	0.84232646	0.798868	0.8577602	1.4547586	0.84145805	1.287282	0.86676514	1.046778	1.2059963	1.173632	0.7932474	0.835735
Tissue inhibitor of metalloproteinases-1	1.0744667	1.0057772	1.2033454	1.5195376	1.7240098	1.2276542	1.1589249	0.89968694	0.9107084	1.0060657	1.0843503	1.2628644	1.0127232
ID-1	0.8233485	0.7499212	0.9970877	0.94381285	1.7273318	0.94118048	1.018514	0.8000023	0.90817344	1.0195991	0.9850288	0.80978847	0.918113
Ribosomal protein S9	0.9330949	1.3955247	0.8008379	0.8404257	1.3449265	1.410056	1.0602819	0.75981486	1.0381054	1.2888178	1.458815	0.8758875	0.3082544
Heme oxygenase	1.2070799	0.8551037	1.2530507	1.032837	0.958706	0.8280228	1.0622118	0.9523256	1.008816	0.8406006	0.9228605	0.854371	0.9872378
Ribosomal protein S8	0.8573498	2.0813603	1.1953193	1.0681615	0.61524343	1.0954412	1.0208149	1.0658484	1.0617156	1.018034	1.0352868	1.1578768	1.1258156
Ribosomal protein S17	0.8990686	1.9184402	1.0321016	1.0209562	0.8382872	1.0374516	0.983239	0.9633588	0.9804687	0.975534	1.022062	1.1725786	0.9063316
Nucleoside diphosphate kinase beta isoform	1.119488	1.0417342	0.7368604	0.8210776	0.8108011	0.93407625	0.867805	0.8120618	0.8786905	0.8786905	0.8786905	0.8786905	0.8786905
Phase-1 RCT-121	1.041897	0.7225234	1.3962892	1.1104314	1.0499172	0.8637809	0.7984258	0.7500802	0.8717266	0.7500802	0.8717266	0.7500802	0.8717266
14-3-3 zeta	1.009612	0.7201351	0.9200557	0.900278	0.8912045	1.0303028	1.112764	1.1584827	1.0054084	1.018145	1.0054084	1.018145	1.0054084
60S ribosomal protein L8 (alternate clone 1)	0.873324	1.5547072	1.464582	1.011876	0.8912045	1.0303028	1.112764	1.1584827	1.0054084	1.018145	1.0054084	1.018145	1.0054084
Beta-tubulin, class I	1.1141939	1.4380772	0.8872885	0.9884317	1.0285627	1.033861	1.1811702	1.0402933	0.8574746	1.058823	1.016504	0.7786593	0.92899495
Organic carbon transporter 3	0.7897837	1.2360339	1.0742307	1.0681566	1.1260966	1.1415148	1.1855589	0.8398094	0.8819094	1.0815742	1.0635039	1.1265732	1.0643888
Beta-actin	1.0513736	0.8041124	0.75533444	0.7546243	1.260966	1.1621771	1.0661271	0.8582356	1.1907812	1.3037747	1.381804	1.0594404	0.97643856
Cathepsin S	1.1021055	0.9787874	1.090808	1.0983488	1.0561284	0.8828356	1.1568075	1.1907812	1.3037747	1.381804	1.0594404	0.97643856	0.97643856
Biliverdin reductase	1.1094318	0.81400805	1.0048004	1.1377785	1.6762749	1.1467358	1.2478143	0.9228338	0.98994565	1.0832331	1.0842054	0.84818946	0.87030095
Phase-1 RCT-154	0.98103285	0.8040818	1.055397	1.106584	1.150198	1.0116355	1.1629112	0.9255705	1.0843228	0.82384017	1.0850054	0.98578895	0.8652214
Phase-1 RCT-293	1.0188287	1.33934	1.0748171	1.1238401	0.70315454	0.9828778	0.9594051	0.97539771	1.012319	1.0022143	0.99824653	1.142173	1.142173
Annexin V	0.9688961	0.8520683	0.9704871	1.213216	1.3281613	0.9173401	0.9495528	0.9871434	1.0417882	0.9294087	1.2255098	1.1607822	0.8174758
Complement factor I (CFI)	0.8316524	1.5823393	1.078145	1.0946413	0.9500461	1.1923654	1.1859881	1.2835187	1.2340344	1.1100818	1.2331743	1.3581369	1.4308838
Phase-1 RCT-276	0.7344874	1.81371	0.8710814	1.0083209	0.8084798	1.2528957	1.4249572	1.008484	1.4033075	1.2432503	1.3369963	1.272715	0.9950092
Tyrosine aminotransferase	0.81203496	1.8325017	0.854351	0.580529	0.7323084	1.263634	1.5440086	1.8828937	1.2981122	1.3057829	1.2368178	1.8742124	1.8154205
Glutathione peroxidase	0.6888907	2.1973068	1.1576897	1.2254207	1.0257491	1.1557893	0.948698	1.1810063	0.898239	0.71286	0.9261704	1.240109	0.9920865
Histidine-rich glycoprotein	0.75602886	2.2952065	0.903202	0.60383	0.6387624	1.2712865	1.1781503	1.4316353	1.184233	1.084233	1.087442	1.4050097	1.1104081
Carbonic anhydrase III, sequence 2	0.72484225	2.1553049	0.89117014	0.6912016	0.6809881	1.2994146	1.1855788	1.4376353	1.1784754	1.2574533	1.1108578	1.9451588	1.4344488
Phase-1 RCT-42	0.8556971	1.464537	0.638216	0.8494544	0.8008252	1.1749715	1.1617099	1.2269214	1.1192424	1.144151	1.0212548	1.3877089	1.1604695
Transitional endoplasmic reticulum ATPase	0.8473463	0.9245597	0.6517322	0.9646396	1.2160117	1.0320883	1.2957776	0.9704338	1.1471937	1.155632	1.0645363	1.0645363	0.9359869
Phase-1 RCT-68	0.8448252	1.5192282	0.9475745	0.9380083	0.73118925	1.2516578	1.7297776	0.9704338	1.1471937	1.155632	1.0645363	1.0645363	0.9359869
Phase-1 RCT-286	0.8682084	1.5856497	1.0986455	1.4811057	0.7536325	1.2078798	1.1132437	1.2348603	1.1804221	0.9857831	1.0036533	0.94724137	1.3489665
Phase-1 RCT-161	1.22853	0.848035	1.0548177	0.9885113	0.91440858	0.87293868	0.7738249	0.86358106	0.80458224	0.80458224	0.90334784	0.9174682	0.97252566
Glutathione S-transferase (theta-1)	0.725576	1.0794172	0.8070777	1.1814978	0.9622586	1.1441628	1.3846014	1.1876478	0.9556887	1.0801333	1.108382	1.2842436	1.1913857
Phase-1 RCT-168	0.8579966	1.022048	0.8818226	0.8543713	1.0255928	0.9884142	1.3314279	1.091761	1.2204013	1.1140236	1.3835763	1.0008577	1.0115515
Phase-1 RCT-182	0.76925725	1.0887351	0.8136285	1.0425428	0.9763019	1.0244214	1.0027685	1.0875828	1.2054689	1.1050578	1.0749513	1.153186	0.88245925
JNK1 stress activated protein kinase	0.6086008	1.0917792	1.2386584	0.9435091	0.7767954	1.217618	1.2807125	1.8769037	1.1874931	1.2887684	0.93430847	1.9044608	1.3127513
Phase-1 RCT-81	0.87857564	1.2823347	0.8362815	0.9299781	1.0568056	1.218669	1.2427287	1.701169	0.8873421	1.321114	1.2540448	1.3018084	0.878245
Phase-1 RCT-33	0.9320778	1.1280868	1.0777398	0.9030384	0.91340304	1.0874577	1.701169	0.8873421	1.321114	1.2540448	1.3018084	0.878245	0.878245
Phase-1 RCT-178	1.1124177	0.7581621	1.1644044	0.9983416	1.4607775	1.9818085	0.8850252	0.8861756	1.0405354	0.8400354	1.2700985	0.5715875	0.5715875
Apolipoprotein CIII	0.8982792	1.0108827	1.2408808	0.95288416	1.2818281	1.093252	1.2348678	1.1810548	1.2675391	1.4012852	1.1493348	1.3965524	1.2922833
Phase-1 RCT-88	0.989253	0.99433218	0.795604	0.883294	1.0174438	1.1537381	1.0156674	1.0895042	1.0646377	1.0463777	1.050598	1.2088352	1.1651249
NADH-cytochrome b5 reductase	0.8600883	1.2772608	0.8212825	0.8725542	1.1184317	1.3064586	1.2599662	1.3661387	1.1834365	0.99737936	1.170126	1.2181643	1.2781003
Alpha 1-inhibitor III	0.7434328	1.2595553	1.0017571	0.8876257	1.1098822	0.7058642	1.0895942	1.3661387	1.1834365	0.99737936	1.170126	1.2181643	1.2781003
Phase-1 RCT-233	0.8949451	1.3968143	1.1590326	0.98854183	0.9051749	0.9585473	1.4739169	1.0717282	0.9465927	0.9465927	1.0682925	0.96040136	1.0740812
Paraoxonase 1	0.82768065	1.2522312	0.946895	0.9551003	0.831981	1.041774	0.7235389	1.6846441	1.1816046	1.0369233	1.2396885	1.9073311	1.9917859
Phase-1 RCT-227	0.6708217	1.3827856	0.9084138	1.2304703	0.89273604	1.037053	1.1369281	1.3435662	0.89901653	1.017398	1.1359178	1.488157	1.4566234
Cytochrome P450 2C23	0.8278708	1.0237017	0.8119346	0.4496242	0.7718899	0.85642076	0.89533895	1.7193094	1.2624382	0.8183033	1.021913	1.2500123	1.2380608
Hepatic lipase	0.94913065	0.9503947	0.8605049	0.7477098	1.5341365	1.0371765	1.3928787	0.898433	1.0582768	1.0603793	1.1700701	0.890294	0.894687
Phase-1 RCT-164	0.90209764	1.1018918	1.0118598	1.0524917	1.2028285	1.7532137	1.952517	0.8949388	1.2652526	1.3414037	1.2700728	0.890294	0.894687
Multidrug resistant protein-2	0.87688783	0.7488455	0.9655973	1.1954582	1.8992503	1.3727881	0.9021665	0.8568303	1.1612363	0.9378889	0.8302345	0.8207809	0.8207809
Insulin-like growth factor 1, exon 6	1.1168411	0.63702947	1.1221433	0.75357413	0.96530285	0.8865702	1.0808765	0.8542873	1.051881	0.99892255	1.0043169	1.5859485	1.5859485
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	1.077491	0.9508961	0.876423	0.6438901	0.9780842	0.90272737	0.9753758	1.1620846	0.8841273	1.137288	1.1288964	0.9856857	1.1377486
Dynamin-1 (D100)	0.8945248	1.2370943	1.1646252	0.9901801	0.8135103	0.89204437	1.0732712	0.94508476	1.0761161	0.9533131	0.9248783	1.1911267	1.0122385
DNA polymerase beta	1.0427028	1.4122742	0.80351406	0.80978806	1.1042727	1.0399185	1.1406584	1.1623557	1.0608837	1.0800873	1.1538923	1.1227594	1.1184354

Table 30

Phase-1 RCT-173	1.2300069	0.77643484	1.3245456	0.9327029	0.8572029	1.0487052	1.2551797	1.0867364	1.2446572	0.9793871	0.8890109
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.84956324	1.4173315	0.98392504	0.9148318	1.0862191	1.0487052	1.2551797	1.0867364	1.2446572	0.9793871	0.8890109
Ribosomal protein L13A	0.7791645	1.0633088	1.1194628	1.0266778	1.2409854	0.88074154	0.9997685	0.8222368	0.987346	0.7688398	0.8528652
Phase-1 RCT-144	1.1100124	1.102073	0.9002266	0.92802125	1.1061742	0.9635666	1.1475734	0.80529	1.09220479	0.8522104	0.8242386
c-Ha-ras	0.88445395	1.132706	1.1560602	1.1443124	0.9054654	0.874389	0.9840175	0.9937957	0.9901051	1.0159333	1.0753113
Vesicular monoamine transporter (VMAT)	1.2284213	1.4504734	1.247378	1.2061437	0.8901113	0.8314938	0.9840175	0.84040897	0.8013914	0.80254674	0.8329504
Phase-1 RCT-273	1.202186	0.7928652	1.0551035	1.1615938	1.0365554	0.866980174	0.82561815	0.81339025	0.82188874	0.8262768	0.87578426
Phase-1 RCT-230	1.3736684	0.72872865	1.258834	1.0276912	1.1695052	0.9683319	0.75451815	0.7928672	0.73411524	0.7914886	0.8211702
Phase-1 RCT-74	1.5417248	0.852891	1.0930036	1.3320521	1.16164	0.8103122	0.7205881	0.7953501	0.73411524	0.7914886	0.8211702
Phase-1 RCT-40	1.3521874	0.89176327	1.0406904	1.1987558	0.9989903	0.8064458	0.72483367	0.70877314	0.73365016	0.7671824	0.8084106
Phase-1 RCT-158	1.1141398	0.78911936	1.0907594	1.0528787	1.1529331	1.0016923	0.8540833	0.76275987	0.83002655	0.9382424	0.8230098
Deoxyribosyl kinase	0.88734823	0.8989118	1.2802887	1.1763997	1.2989392	1.0670684	0.87590326	0.7625461	0.8388842	0.8626284	0.9293798
Inositol polyphosphate multikinase (Ipmlp)	1.2142767	0.96276027	0.9953627	1.1308321	0.80401635	0.82621396	0.9009819	0.79516184	0.817778	0.78350784	0.8437855
Neuronal cell adhesion molecule (NCAM)	1.1676376	0.83934565	0.9741114	1.1535258	1.1693034	0.8113864	0.86550896	0.76235594	0.6634282	0.74345434	0.8468230
Hepatocyte growth factor receptor	1.2774403	1.2138721	1.0650774	0.9581001	1.0565009	0.78013864	0.7620726	0.8780803	0.73037287	0.76289135	0.8550485
Empty	2.0026042	0.7417127	0.987758	1.2098912	1.6653881	0.8873052	0.7842007	0.8150193	0.7131155	0.81022686	0.8263649
Dopamine receptor D2	0.9532152	0.9653042	0.776877	0.956966	1.3457183	1.3024242	1.2793925	1.1501945	1.1249388	1.1384424	1.2043465
Phase-1 RCT-51	1.0282768	0.81880716	1.1091812	1.1120514	1.0432878	0.96554549	0.8592858	0.855568	0.8787681	0.80431646	0.8545905
Four repeat ion channel	1.2250507	0.85168927	0.9965034	1.1316313	1.0792261	0.9330069	0.8426274	0.8371384	0.8731721	0.8411725	0.8532833
Adrenomedullin	1.8654628	0.8449052	1.3302706	1.2888163	1.124455	0.75030506	0.7050119	0.65785694	0.61491884	0.68525404	0.7345747
Caveolin-3	1.2471005	0.7861882	1.0117692	1.1645716	1.1437287	0.83137286	0.7427624	0.87313784	0.75389	0.7716141	0.7790591
Phase-1 RCT-128	1.3336897	0.8138916	1.0508121	1.2130643	0.9758011	0.9044537	0.73824716	0.7288074	0.7313898	0.7748978	0.7754504
Phase-1 RCT-44	1.1808633	1.0453447	1.059846	1.1028468	0.965078	1.015921	0.8510314	0.7635465	0.8738783	0.88952595	0.9235113
Sarcoplasmic reticulum calcium ATPase	1.046261	0.9798814	1.057402	0.869839	1.041428	1.1811609	0.7825512	1.0370559	0.8267623	1.0014943	0.9802034
Phase-1 RCT-76	1.2933957	0.7507653	0.990051	1.0297281	1.1608572	0.86952068	0.76951738	1.1467558	0.988472	0.8392873	0.8746166
Phase-1 RCT-252	0.75440156	1.2824513	1.087198	1.1500213	0.8020839	1.1762687	1.142303	1.7208811	1.1843176	1.1248378	1.1468526
Phase-1 RCT-151	1.0314409	0.8423304	0.96397455	1.1132432	1.0458986	1.0597308	1.0504254	1.021261	1.033225	1.1873386	1.1230055
Phase-1 RCT-70	1.270778	0.8600726	0.980562	0.8881667	1.0274487	0.8170957	0.8163898	0.82567405	0.8413414	0.8422783	0.87318724
25-hydroxyvitamin D3-1 alpha-hydroxylase	0.7838613	1.0428389	0.7572721	0.9473688	1.3425242	1.3203033	1.4157504	1.3452406	1.4331381	1.2453968	1.2628434
Phase-1 RCT-150	0.8641843	0.7702293	1.2438115	1.0533031	1.8810882	0.8978958	0.8289589	0.83165075	0.7405817	0.8251729	0.7838436
Peroxisomal 3-ketoacyl-CoA thiolase 2	0.85838425	1.0231134	1.0665864	1.1256687	0.77677804	1.1324556	1.2539284	1.0092134	1.0872755	1.130971	1.0935573
Phase-1 RCT-119	1.3571917	0.8274188	1.1850945	1.1218638	1.1566522	1.0970815	0.8305411	0.88889753	0.8284166	0.8518653	0.9715733
Phase-1 RCT-146	1.0023065	1.0416437	1.0696002	0.7879271	1.3366034	1.0512688	1.107422	1.2420467	0.9483983	1.0715651	1.168977
Superoxide dismutase Mn	1.1609739	0.7206215	1.0507882	1.2108638	1.861642	1.0692649	1.0423611	1.1218072	1.04256	1.2916757	1.2217886
Phase-1 RCT-115	0.78406934	1.4603966	0.7547584	0.8745368	0.917112	1.2383048	1.2688946	1.3904759	1.3791671	1.112113	1.211702
Alpha-1 microglobulin/bikunin precursor (Ampb)	1.1692878	0.9611789	0.98015314	1.0970784	0.8913752	0.9803511	0.7700945	0.76589424	0.8790693	0.7992077	0.7937298
Phase-1 RCT-18	1.1018588	1.2353482	1.1784683	1.1116478	1.2140319	0.7879232	0.72759104	0.7187081	0.656511	0.73013246	0.7935929
Masspin	1.3723459	0.74480744	1.204024	1.2841392	1.2410264	0.83309114	0.7608572	0.6920671	0.76891845	0.8107136	0.788436
Decorin	1.0914011	0.68923825	0.8619828	0.9562518	1.53156	0.9895458	0.8370605	0.7708459	0.9662337	0.8830858	0.9206517
Retinol X receptor alpha	0.910853	1.2214773	1.2959226	0.72608733	0.8733786	0.9617794	1.0083484	0.9247546	1.056589	0.988928	0.9338654
Cellular nucleic acid binding protein (CNPB)	1.1489644	0.875736	0.79449904	1.9041387	1.4203488	1.0990472	1.1584447	1.1808475	1.0215597	1.3827688	1.1410568
NADPH cytochrome P450 oxidoreductase	1.4304378	0.69925077	0.69505683	0.8940287	1.6886986	0.97946208	0.8469395	0.7595478	0.8575084	0.9205786	0.77259594
Caspase 1	1.0376418	0.72370017	1.1578059	1.2711588	1.7855904	0.9169884	1.4040004	0.80115804	1.191941	1.0780508	1.5519623
Cystatin C	0.81283524	1.1215786	0.9018414	0.953244	0.8542857	1.1218093	1.1076054	1.4042165	1.1063809	0.8692882	0.9291672
p55CDC	1.3350735	0.85503834	0.9202584	1.0078651	1.302827	1.3501107	0.8625534	0.9495600	0.8198846	0.72503316	0.80821854
Poly(ADP-ribose) polymerase	1.050837	0.9702824	0.93273085	1.0987103	1.3425574	1.1760064	1.2670895	0.9271544	0.93842256	1.346182	1.2707748
Tissue plasminogen activator	1.0770012	0.8901863	0.8059819	0.9157889	0.8458018	1.11193	0.9019023	0.8883307	1.0018314	0.9364673	0.5375308
Multidrug resistant protein-1	0.8238588	0.8641516	1.1359741	1.3876598	1.2865359	0.90716315	0.7808962	0.9686236	0.9865309	1.283138	1.0949279
Phase-1 RCT-207	1.0286163	0.7884164	1.1817889	0.99532233	1.1095212	0.9513911	0.9072628	0.86779628	0.9253048	0.9133348	0.8703352
Phase-1 RCT-181	0.8562306	1.0658751	1.1851523	0.9302142	1.1054971	0.91115475	0.98890783	0.8623259	0.9688761	0.8698046	0.8544776
Gap junction membrane channel protein beta 1 (Gib1)	2.0006163	0.8841516	1.1528742	1.2151817	0.884026	0.67289044	1.0443312	0.8484884	0.8839536	0.7913662	0.8706143
Aquaporin-3 (AQP3)	1.1444134	0.9534005	0.8978315	1.0270131	0.96415765	1.0107428	0.8972055	0.81697265	1.0748208	0.9611254	1.0465581
Myelin basic protein	0.9464282	0.7530213	0.9174004	0.8355573	0.6598288	0.85776716	0.8742295	0.78468487	0.8409464	0.75823206	0.7837765
Calgranulin B3	1.0714388	0.83139568	1.0396832	0.85498444	1.0802188	0.9757901	1.0816836	0.9337286	0.87184083	1.0400078	0.9944027

Table 30

Phase-1 RCT-159	0.8287804	1.1273481	0.8525945	0.8657587	0.78670585	0.97100616	0.8812501	0.89831203	1.0131239	1.0127658	1.0474192	0.9220269	1.0800399
Protease activator 28 alpha	0.9028982	1.0465639	0.9844968	1.0277295	1.2256494	1.0502862	1.00739	1.2053181	1.2216734	1.1102302	1.208119	1.1395638	1.0903785
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes-necr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint															
(1)															
Compound-Dose (2)	PBARB 20	PBARB 80	PBARB 160	PBARB 256	PBARB 512	PBARB 1024	PBARB 2048	PBARB 4096	PBARB 8192	PBARB 16384	PBARB 32768	PBARB 65536	PBARB 131072	PBARB 262144	PBARB 524288
Animal Number (3)	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)															
Phase-1 RCT-107	1.2903292	0.9318629	0.88337725	1.1227789	1.03611755	0.83776566	1.1955937	0.94461066	0.7158433	0.82637364	1.168981	1.1945151	2.641321		
Betaine homocysteine methyltransferase (BHMT)	3.9637373	1.4573135	1.1002183	2.431861	1.3200847	0.84044095	1.1407007	0.84044095	0.28214146	1.1755371	0.59487575	0.82998157	1.5356477		
Proliferating cell nuclear antigen gene	0.8373708	0.9234343	0.9890034	0.85197487	0.98647385	0.9832838	0.9832838	0.9832838	0.9832838	0.9832838	0.9832838	0.9832838	0.9832838		
Cytochrome P450 2D18	1.0623835	0.1070162	1.1525858	0.10731335	0.7714122	0.6510719	0.658903	0.65778663	0.77798553	1.7464085	1.5186393	2.2032201	2.5513594		
Cytochrome P450 2C11	0.8369874	0.9706706	1.0683271	0.81297153	1.1524122	0.70829146	1.1436024	1.1970404	0.2091826	0.92818874	0.9391282	1.3219321	0.9399312		
Phase-1 RCT-290	2.3765686	1.2950222	0.8346403	1.854224	0.70829146	0.94510454	0.85159454	0.85159454	0.85159454	0.85159454	0.85159454	0.85159454	0.85159454		
Phase-1 RCT-59	0.1548055	0.8664096	0.8664096	0.8676318	0.82131186	0.9079866	0.9079866	0.9079866	0.9079866	0.9079866	0.9079866	0.9079866	0.9079866		
Beta-actin, sequence 2	1.4097862	1.0162219	0.9737726	0.90136087	1.0122339	0.981077	0.83747244	1.1301882	0.85529374	1.0644183	0.82076544	0.90433753	1.1818012		
Phase-1 RCT-282	1.1873741	0.8832178	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248	0.9482248		
Pyruvate kinase, muscle	0.9975391	1.0104924	0.8992288	0.83407164	0.9140275	1.020891	0.95178634	0.83319753	0.83319753	0.83319753	0.83319753	0.83319753	0.83319753		
Osteocalcin	1.0681022	1.020692	0.99112856	1.0095752	1.0243467	1.039851	1.028851	0.9500734	0.843942	0.843942	0.843942	0.843942	0.843942		
Calgranulin B1	1.0118395	0.8789976	0.9243778	0.91695168	1.0130594	0.99404687	1.08233	0.643942	0.8885643	1.1163471	0.9807759	1.0627056	0.9838506		
Acidophorin All	1.0809634	0.7567417	0.87481754	0.8704185	1.1925695	1.4729168	1.3810918	0.60214114	0.60214114	0.60214114	0.60214114	0.60214114	0.60214114		
Conradin-32	1.1778136	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528	0.8801528		
Phase-1 RCT-109	1.0263973	0.8244018	0.82651446	0.79597884	1.1872802	1.1042807	1.0190637	0.92697384	0.8441471	0.8441471	0.8441471	0.8441471	0.8441471		
Glycine methyltransferase	1.7579016	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452	0.9720452		
L-glutono-gamma-lactone oxidase	1.657958	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576	1.0800576		
Phase-1 RCT-256	1.8779353	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085	1.2232085		
Carbonic anhydrase III	1.2634404	1.6770509	2.071214	0.9208979	1.0644541	0.7034708	0.70476115	0.9881236	1.144252	0.46818883	1.013238	0.9082011	1.4550887		
Phase-1 RCT-78	1.5177132	1.393867	1.2000902	0.96236214	0.96931636	0.95405143	0.87923115	0.807979	1.1315693	1.1033984	1.083137	1.2491162	1.3248735		
Urethyl protein 2 precursor	0.9400884	1.1516211	1.0524501	1.2756629	1.3856211	1.2045159	1.0374889	0.8028839	0.5911643	0.5667692	0.47459157	0.8829346	0.67383		
Insulin-like growth factor 1	1.4812555	1.105781	1.0251907	1.2005908	0.7862857	0.7993057	0.8950598	1.554046	0.88643684	0.6375843	0.64252174	0.56074446	0.788953		
Aryl sulfotransferase	2.1868994	1.3299693	1.352556	1.8325254	1.3258157	0.9076817	1.0354532	0.98119148	0.7980717	0.60765046	0.6320163	0.7014889	0.789853		
Phase-1 RCT-185	1.4147478	1.5131245	1.7274619	1.1878654	1.1878654	0.7565421	1.0361671	1.1244238	0.90807093	0.6056197	0.76333664	0.87350024	0.85036557		
Stathmin	1.2154084	1.2362891	1.314074	1.2810208	0.8754651	1.0900774	1.025707	1.2336713	1.4182134	1.0398918	0.8313666	0.98205155	1.1515704		
60S ribosomal protein L6	0.9493735	0.9496202	0.96232864	0.8697178	1.0348847	0.9930269	1.0182971	0.86410328	1.148134	1.1523936	1.1163179	1.4786596	1.0329274		
Calretinin	0.8706761	1.0515441	1.0744861	1.0233688	1.1322695	1.1411678	1.0983227	1.044822	0.9631763	0.968061	1.0022094	0.9656165	1.0649172		
Calretinin heavy chain	0.9987183	1.0200584	1.00913	0.8321313	1.0536147	0.9840707	1.0276369	0.76788096	0.85345435	1.4140733	1.0173007	1.2143031	0.9946806		
Collagen type II	0.88445165	0.8422933	0.87410814	0.78670885	1.403999	0.92348154	1.349897	0.78344144	0.82636067	1.580472	1.2148036	1.163406	1.0059894		
Phase-1 RCT-179	1.0375403	0.9665334	1.0143441	1.0893667	1.1870441	1.1313829	1.1192511	0.78741696	0.91554597	0.933717	0.8228633	0.9304763	1.008139		
Voltage-dependent anion channel 2 (Vdac2)	1.2807249	1.0950618	1.0731391	1.032711	1.0539957	1.2049714	1.1618896	0.7220368	0.87877864	0.851603	0.7743031	1.0120245	1.0869623		
Phase-1 RCT-182	0.7512921	0.822525	1.0265126	0.8808383	1.2404513	1.2108684	1.1913316	0.90805334	0.87818574	0.79200625	0.76988834	0.5695502	0.7328478		
Adenine nucleotide translocator 1	0.69519746	0.83341396	1.0005333	0.8818355	1.4447226	1.1191316	1.0551832	0.88018574	0.79200625	0.76988834	0.5695502	0.7328478	0.8672154		
Thymosin beta-10	0.7858071	0.8749503	0.8513818	0.8893719	1.4785045	1.0188071	1.1494175	0.89040896	0.6787622	0.82028636	0.630448	0.84340876	1.0648789		
High affinity IgE receptor gamma chain	1.1409408	0.95779854	1.0208466	0.87269145	1.1324425	1.1602678	1.1379485	0.81689507	1.2744132	0.7075291	0.8302208	0.6757565	0.8078083		
Gamma-actin, cytoplasmic	1.50335393	0.91300327	0.8772457	0.7291581	0.74205744	1.0207636	0.76055663	1.43216	1.0673985	0.9080726	1.089746	0.9382038	0.8846594		
Uncoupling protein 2	0.83336725	0.89006656	0.8258673	0.81559755	1.1343237	1.0152855	0.767917	0.984815	1.147932	1.5711831	1.5689759	1.4106271	1.5689759		
Phase-1 RCT-34	1.1486868	0.9601383	1.1301622	0.876281	0.8656791	0.9822222	0.9830805	1.0072908	1.0380098	1.4012506	1.2869945	1.350977	1.2074572		
Phase-1 RCT-31	2.586481	1.275705	1.626102	1.762187	0.8471023	1.0148394	0.78198594	0.40708035	0.92954034	1.8558177	0.8247479	1.550976	1.572298		
Cyclin D1	0.6669847	0.81449765	0.7869943	0.7456075	1.0734183	0.693113	1.1350865	1.0115763	0.10591018	0.517467	0.65465543	1.6550831	0.74278075		
IgE binding protein	0.951803	1.0220971	1.016634	0.7316075	1.0138836	1.1052861	1.1679251	0.9235202	0.1854337	1.286193	1.3228652	1.3914987	1.3165846		
Zinc finger protein	0.8719644	0.8578004	1.0957803	0.89915246	1.2171284	1.0234778	1.0835189	1.0276921	0.8406398	1.0540551	0.8198645	0.9810711	1.1003344		
Phase-1 RCT-138	1.354122	0.94231606	0.93835465	0.98959674	0.98959674	0.87409528	1.1684656	1.0029787	0.9583789	1.4318782	1.3891655	1.3768539	0.9893583		
Alpha-tubulin	0.785783	0.94085343	0.95059616	0.8416742	0.9287666	1.1379485	0.84635663	1.156592	1.025932	1.001581	1.2042308	1.001581	0.9893583		
Alpha-prothymosin	1.5526446	1.3135582	1.425532	1.3598168	1.0831113	0.8723897	1.182277	0.5086754	0.8360377	1.831552	0.8432443	1.4608874	1.5061911		
Calpain 2	0.89538483	0.8275982	0.85330346	0.9140138	0.907483	0.89865185	0.9060754	0.97915316	1.0812542	1.084481	1.184758	1.2934586	1.1743277		
Phase-1 RCT-12	0.97470108	0.8164652	0.89727855	0.7743334	0.781499	0.9490077	0.7730046	0.81586193	0.9187654	1.152283	0.9603658	1.2350024	1.0139291		
Cathepsin B	1.2807446	1.3415164	1.0504866	1.2152315	1.1723552	0.95104223	1.0195068	0.8269866	0.6298973	0.714721	1.3668635	0.93269855	1.16959		
Phase-1 RCT-24	0.7897209	0.8274485	0.7786192	0.8744553	0.8889429	1.184468	0.83810426	0.8936416	0.8445062	1.3786678	1.3072017	1.6399878	1.2235484		
Melanoma-associated antigen ME481	0.89216685	0.8623412	0.8815501	0.84552674	1.2210563	1.2444118	1.2330344	0.9559927	1.0527531	0.9698167	1.3292792	1.4894618	1.4840889		

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Phase-1 RCT-68	1.022885	0.97703046	0.98441917	0.93379706	0.9155279	0.9601467	0.94255745	1.0279106	0.9339419	1.2339146	1.0209941	1.0608916	1.0488402
Cyclin G	1.588964	0.96051115	0.7323843	0.8265398	0.9235245	0.9759317	0.9759317	0.95023394	1.6005005	1.0202231	1.0936147	1.3180543	0.9869326
Hypoxanthine-guanine phosphoribosyltransferase	0.85499007	0.9122581	0.91750103	0.84749424	0.84304017	0.9179947	0.8586377	0.9635972	0.88280894	1.2323058	1.0381074	1.2490537	1.2742615
Tissue inhibitor of metalloproteinases-1	0.8621651	1.0657438	0.91535914	0.8020584	1.172212	1.0664892	1.2145021	0.93812807	1.2243816	1.092937	1.0783108	1.0712314	0.9558068
ID-1	0.7628269	0.89917204	0.87067697	0.8247775	0.9106692	0.8393957	1.0766289	0.9816096	0.94685775	0.977872	1.0081637	0.86196077	0.9558068
Ribosomal protein S9	0.7762632	0.90118754	0.85068878	0.89766675	1.2393398	1.1423813	1.0753813	0.73510164	0.99546534	0.99462777	0.77336885	0.613882	0.6243242
Heme oxygenase	0.8636949	0.850268	0.85933306	0.8518532	0.89021635	1.4814275	1.0473125	1.1485048	1.6164286	2.149804	4.180992	3.4831421	2.9833676
Ribosomal protein S8	1.1589929	1.068068	1.1098942	1.0518838	1.2314607	1.1469644	0.9850563	1.0126342	1.095818	1.2382397	1.3873304	1.2352511	1.380489
Ribosomal protein S17	0.8380409	0.8692522	1.0225258	1.0414035	1.118933	1.3038935	1.1545619	1	0.9253602	0.899139	0.9013101	0.92906976	0.9855127
Nucleoside diphosphate kinase beta isoform	0.8300374	0.9945509	1.0163077	0.8264258	0.9595526	1.0779305	0.94036126	0.6991679	0.7250622	0.9615068	0.6957205	0.7914571	0.8675094
Phase-1 RCT-121	0.7711295	0.9319174	0.8704031	1.042279	1.0728872	1.0291678	1.0865014	1.0398167	1.0239031	1.190455	1.26616	1.2002255	1.2010427
14-3-3 zeta	1.0420884	0.9153973	1.0054821	0.87435687	0.8319162	0.8162805	0.82052517	0.8338615	1.3139108	1.3250484	0.8058768	1.3258454	1.0113115
60S ribosomal protein L8 (alternate clone 1)	1.2132626	1.0540261	1.1147923	1.0351973	0.836178	1.0454322	1.0394444	1.0036154	0.8804236	1.4320704	1.1507964	1.1481127	1.2421256
Beta-tubulin, class I	0.7654402	0.8770018	0.83234716	0.8674054	0.78742373	1.0494907	0.8989831	0.75927204	0.8077533	1.146182	0.93952943	1.1771588	0.96925884
Beta-actin	0.8008734	1.0245893	1.0482943	0.9041853	1.0932629	1.191125	1.0557235	1.0338323	0.9445524	0.8994529	0.8976123	0.99764156	1.0574248
Organic cation transporter 3	1.6262188	0.9682844	0.9474731	0.877177	0.49152657	0.5248449	0.55183053	0.7812191	0.8269113	0.9526022	1.2423221	1.1812712	1.6395159
Calretipin S	1.1796762	1.0986004	1.0154128	1.1252106	1.1197613	1.2823292	1.084383	1.1109492	1.2224767	0.7571489	1.133551	0.75414324	1.0189323
Biliverdin reductase	0.84347737	0.75498414	0.8072573	0.7829774	0.7883865	0.9880469	0.88016765	0.8117963	1.2660569	1.422718	1.4536258	1.8290488	1.4038462
Phase-1 RCT-154	0.8990485	1.0172708	0.92075	0.9386597	1.0273411	1.0660258	1.0521507	0.88449484	1.2545762	1.035023	1.0234758	0.8834881	0.87187415
Phase-1 RCT-283	0.9959736	1.506845	1.0875044	1.1438954	1.1349594	1.077701	1.0829529	0.8286207	0.88634763	0.9291803	1.3984697	1.2163569	1.3466031
Anchored V	0.9792886	1.102159	0.9343134	0.9441067	0.90584797	1.011622	0.9387036	0.9877447	1.278711	0.898813	0.9501181	0.92138524	0.781976
Complement factor I (CFI)	1.2246398	1.4848774	1.205712	1.4355481	1.1354771	1.2874102	1.3407012	1.3712628	1.0674692	0.9467487	1.1769719	1.0739421	1.0554451
Phase-1 RCT-276	1.014451	1.1320951	1.0408127	1.0212385	1.1529163	1.091645	1.0297884	1.0146939	1.068785	0.70288834	0.8888951	0.67240476	0.8786834
Tyrosine aminotransferase	1.9331309	1.5616727	0.7277142	0.952721	1.3418102	0.9307301	1.5890262	1.1775545	1.245201	0.65835553	0.5037633	0.55261797	0.5454088
Glutathione peroxidase	1.1284933	0.79732394	1.0311146	1.0938997	1.1305337	0.9818612	0.83412995	1.0400318	1.0763146	1.0421084	0.6414533	1.0784494	1.0751515
Histidine-rich glycoprotein	1.4364051	1.5130742	1.4611334	1.5754831	1.2719065	0.8711188	0.7784263	0.7167244	1.189443	0.6765587	0.4460198	0.56884846	0.7375781
Carbonic anhydrase III, sequence 2	1.5062171	1.4439722	1.4091774	1.581941	1.3250602	0.86892784	0.7786624	0.8146514	1.1328215	0.9508186	0.77488005	0.5492038	0.7013056
Phase-1 RCT-492	1.3722289	1.2695978	1.2816327	1.36408	1.2920524	1.077499	1.0398436	0.9484853	1.14273	0.886787	0.7487009	0.5831648	0.72108944
Transitional endoplasmic reticulum ATPase	0.8618606	1.0465201	0.9190549	1.0042983	0.9595976	0.9151325	0.89821053	1.3698071	1.0718991	0.943778	0.93510514	0.8725784	0.95531975
Phase-1 RCT-88	0.932835	1.290336	1.1336336	1.1094377	1.1681031	1.0170735	1.0066181	0.9817646	1.055338	0.90908084	0.8138784	0.56772494	0.7712593
Phase-1 RCT-161	1.202564	0.86617894	0.9867122	0.9106881	0.80967203	0.69341975	0.89359725	1.0349288	0.9740557	1.0881542	1.1449795	1.2238936	1.2017641
Glutathione S-transferase theta-1	0.8015393	0.86617894	0.9867122	0.9106881	0.80967203	0.69341975	0.89359725	1.0349288	0.9740557	1.0881542	1.1449795	1.2238936	1.2017641
Phase-1 RCT-168	1.1625053	1.3391485	1.0718215	0.8596172	0.91802075	1.3319447	0.8124835	0.83207675	1.0388012	0.90537894	0.8135014	0.7703828	0.854183
Phase-1 RCT-162	1.0780007	0.94145614	0.93858755	1.006521	1.0243568	1.501132	0.8542834	1.5280278	0.9637863	1.369397	1.1251959	0.8536704	1.0089143
JNK1 stress activated protein kinase	2.0389585	1.423925	1.1107803	1.4521755	1.0371921	0.9939237	1.014904	1.1904075	0.9248467	0.781147	0.7607056	0.7984006	0.9344303
Phase-1 RCT-33	1.053354	0.8871756	1.036781	0.95336014	1.46688	1.1180042	1.2451419	0.8531697	1.2080067	1.2180637	1.0483227	1.1998255	1.2127481
Phase-1 RCT-178	0.82152885	1.503841	0.8328775	0.8569274	1.3870327	1.075884	1.1406921	1.1026682	1.1810222	0.928471	0.8878457	0.87256694	0.8507345
Apolipoprotein CIII	1.1644843	1.1220003	1.0844417	1.2403752	1.2434987	0.9340025	0.9585823	1.2080589	0.8741447	0.899716	0.84902514	0.8974336	0.9871268
Phase-1 RCT-48	1.150512	1.024894	1.0389411	0.9862378	0.9647739	0.9340025	0.9585823	1.2080589	0.8741447	0.899716	0.84902514	0.8974336	0.9871268
NADH-cytochrome b5 reductase	1.3908559	1.1710305	0.9428720	1.1891199	1.008156	1.3491751	0.8314085	1.2940937	0.9213095	0.99145334	0.94905525	0.7727716	1.0168866
Alpha 1 - Inhibitor III	1.8065847	1.4327531	1.2688278	1.7884171	1.0287467	0.7930582	0.6462729	2.7363756	1.1555988	0.4381133	0.67342716	0.8107057	0.9552165
Phase-1 RCT-283	1.1508377	0.62414485	1.2839988	1.1098965	1.4502586	1.1817439	1.2231036	1.1501624	1.2110398	1.0684083	1.0227556	0.8086395	0.8728984
Paraoxonase 1	1.394882	1.2847519	1.4326378	1.8130782	1.2258689	1.2462178	0.9986905	2.189427	1.2371587	0.54989328	0.8105775	0.5350543	0.64370173
Proteinase 1	1.8179574	1.3948231	1.2937711	1.800446	1.0305552	0.8381838	0.67990744	2.8712456	1.1700162	0.4186442	0.7307056	0.83854157	0.97681746
Apolipoprotein C1	1.6201338	1.1659	1.2882545	1.1101732	1.438041	1.168039	0.9456079	0.836313	1.3497448	0.5170944	0.5883837	0.37237847	0.6056793
Cytochrome P450 2C23	1.3457034	1.2638164	1.351868	1.5991495	1.5492147	1.1754739	1.2861823	1.1580917	0.9950424	1.0221078	0.7225109	0.903987	1.0675325
Phase-1 RCT-227	2.149488	1.7654392	1.868248	1.8628185	1.4214001	1.0657364	1.2636497	1.0110458	1.1187497	1.158399	1.01957	1.2680349	1.3559684
Hepatic lipase	0.70765606	0.71878904	0.84265417	1.081393	1.1604581	0.94554114	0.92843515	1.8586891	1.2480601	0.6214073	0.5515267	0.5448428	0.6232082
Phase-1 RCT-164	0.89872556	0.9068482	0.8908896	1.0709443	1.009766	1.0361381	1.1933385	0.8670247	0.8407809	0.7993289	0.62125397	0.982959	0.8654286
Multidrug resistant protein-2	0.80123246	0.6182293	0.86103594	1.0549647	0.8018903	0.6327317	0.6561704	0.4284547	1.141386	1.070072	1.14747	1.397472	0.85928785
Insulin-like growth factor I, exon 6	1.5550039	1.1487107	1.0835723	1.2018107	0.690447	0.6833308	1.2020339	1.7726001	0.8562722	0.9975596	1.36667	1.2800769	1.6802658
N-hydroxy-2-acetylaminofluorene sulfoxidase (STIC1)	1.381815	0.92574006	1.2707722	1.0162817	0.9470569	0.6646127	0.4056219	1.0326995	0.9087156	0.5027654	0.5304251	0.5801848	0.8787214
Dynactin-1 (D100)	0.8416287	1.1046423	1.2052202	1.1578372	1.1588326	1.123796	1.0893624	0.9841706	1.265239	0.9417111	1.1555559	1.0272273	1.093138
DNA polymerase beta	1.2119709	1.2416079	1.0860884	1.1278123	1.0876877	1.1036317	1.011499	0.92123675	1.1651342	0.7108484	0.616541	0.5698499	0.5983545

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Phase-1 RCT-173	0.7762404	0.99983945	0.9918329	0.65948896	1.0625894	0.9149621	0.8574911	0.9295115	1.2112273	1.104633	1.058144	1.1023242	1.0016854
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.82651987	0.85504246	0.9220697	0.94114316	1.22601	1.0746208	1.0378011	0.82266283	1.0073883	0.7316123	0.5806434	0.82407756	0.7091354
Ribosomal protein L13A	0.7569482	0.8542887	0.8520774	0.79446904	1.2659443	1.1776892	1.0510298	0.6873503	0.6946729	1.0488769	1.173363	1.1972297	1.3807391
Phase-1 RCT-144	0.7314596	0.8175564	0.8514395	0.8977876	0.9947886	0.9452782	0.9452782	0.9452782	0.9452782	0.9452782	0.9452782	0.9452782	0.9452782
c-H-ras	1.0310866	1.1048945	0.9021543	0.8880672	0.84052076	0.9312449	0.9911115	1.1379536	0.9279264	0.9279264	0.9279264	0.9279264	0.9279264
Vesicular monoamine transporter (VMAT)	0.8518847	0.9187125	0.7110559	0.895603	1.0356182	1.1495603	1.0356182	1.1495603	1.0356182	1.1114602	1.2901675	1.1293465	0.832107
Phase-1 RCT-273	0.8131816	0.81223774	0.8280425	0.9042269	1.0153139	1.0010017	1.0689605	0.9546691	0.9164756	1.0451697	1.1312445	0.9859355	0.9329176
Phase-1 RCT-230	0.74895337	0.7146933	0.78015824	0.72310898	0.83533424	0.97530085	0.8607096	0.93483186	1.3900096	1.1013381	1.4258934	1.3708018	1.0212104
Phase-1 RCT-74	0.7862145	0.7308989	0.8359204	0.77851175	0.9678464	0.9701628	0.9701628	1.1592219	0.940278	1.0478137	1.0745181	1.0680439	
Phase-1 RCT-156	0.69935393	0.7180599	0.77824974	0.7337194	0.9580689	0.9770324	1.0587512	0.9719737	1.159165	1.0837914	1.1347307	0.9107967	
Phase-1 RCT-156	0.7844329	0.8186687	0.86428356	0.89077924	1.0501882	0.9937069	1.049078	1.2071362	1.108907	1.108907	1.108907	1.108907	1.108907
Inositol polyphosphate multikinase (Ipmt)	0.8335188	0.6711952	0.812216	1.025524	0.90231586	1.0451534	1.0451534	1.166041	0.8830123	1.166041	1.166041	1.166041	1.166041
Neuronal cell adhesion molecule (NCAM)	0.8192369	0.7328593	0.761929	0.7143813	0.81847397	0.9490726	0.99647975	0.82148095	0.82148095	1.176518	1.1234489	0.90331274	
Hepatocyte growth factor receptor	0.9464396	1.0340605	1.0028198	0.97149277	1.0106571	0.85122776	0.8233464	0.77138925	1.087508	0.8233464	0.8233464	0.8233464	0.8233464
Empty	0.7972846	0.66781904	0.80555546	0.773191	0.98326517	1.0236624	1.0879178	0.7642908	0.90102935	1.220631	0.8624555	1.0328321	0.76836294
Dopamine receptor D2	1.1717018	1.094111	1.0023713	1.0605628	1.0210695	1.030002	1.0879178	0.7642908	0.90102935	1.220631	0.8624555	1.0328321	0.76836294
Phase-1 RCT-51	0.90324163	0.85845598	0.87129315	0.9318498	0.99381926	1.0273391	1.0660139	1.2694676	1.278198	0.8505877	0.8253808	0.8253808	0.8253808
Four repeat ion channel	0.8523694	0.784405	0.9134761	0.83863163	0.89568266	1.0097677	0.8978915	0.89250473	0.934717	0.7212574	0.8347888	0.595301	0.5277897
Adrenomedullin	0.5707395	0.6533417	0.60893404	0.6601207	1.0871254	1.0727403	1.2380942	0.933573	1.4500794	1.0553362	1.3820066	1.0149952	0.8934034
Caveolin-3	0.8786301	0.7405132	0.9305668	0.79893747	1.0822054	0.97046137	0.8801104	0.94521034	1.1538031	1.0467342	0.8811941	1.0755775	0.8268876
Phase-1 RCT-129	0.7216884	0.891285	0.7775085	0.70737497	0.9537605	0.9698032	1.0253574	0.899542	0.96018773	0.9094181	1.0768709	1.0671605	1.0086608
Phase-1 RCT-84	0.74531704	0.75211126	0.9820584	0.93318594	1.0168519	1.0675995	1.0722713	1.0794485	1.2816593	1.0528844	0.86675397	1.13294	1.004846
Sarcoplasmic reticulum calcium ATPase	1.0267248	1.1700073	1.0653737	0.8648458	0.96053046	0.9571156	1.006895	1.0380048	1.0663073	0.8430422	0.9856153	1.0681800	0.8620878
Phase-1 RCT-79	1.3028767	0.851862	0.8697784	0.9207616	0.9047365	1.0288797	1.159239	0.96603674	1.2813902	1.029481	1.25728	1.315637	0.9028878
Phase-1 RCT-252	2.0133133	1.1652373	1.2234766	1.4942291	1.3074006	1.2799039	1.327359	1.2380458	0.9163833	1.2498994	1.0039749	1.2130235	
Phase-1 RCT-151	0.995321	1.1551747	0.9349507	0.9604408	1.0297359	0.9543974	1.0068721	1.290009	0.9734596	1.0279009	1.0326151	1.0117401	1.174315
Phase-1 RCT-70	0.7656943	0.8902651	0.8483225	0.7690508	0.9848842	0.9900983	1.0822538	1.2259948	0.7516235	0.8690172	1.0837224	0.9088946	1.179461
Phase-1 RCT-150	1.2374915	1.1751758	1.1750705	1.1691355	0.9957004	0.94509065	0.9167508	0.942024	1.225369	1.0528844	0.86675397	1.13294	1.004846
25-Hydroxyvitamin D3-1 alpha-hydroxylase	0.7906169	0.81254848	0.9221025	0.77043295	0.9985105	1.0324934	1.01112	1.0424108	1.522431	1.0940301	1.0886085	1.3954577	0.822318
Phase-1 RCT-119	0.9746108	1.0298239	1.0420666	1.1476056	1.1218228	1.1823338	1.254989	1.3293836	0.9827153	1.3721027	0.9788378	1.163348	1.2832401
Peroxisomal 3-keatoyl-CoA thiolase 2	1.0416864	1.0592822	1.0829824	1.0394281	0.8437558	0.9399003	0.7653528	1.016673	0.78009033	1.7307568	1.4512855	1.2765489	1.2854508
Phase-1 RCT-146	0.80490816	0.8354396	0.8801082	0.79114383	1.0326479	0.9935144	1.0360625	0.8923474	1.9554602	1.1739262	1.0124935	1.3903377	1.0022497
Superoxide dismutase Mn	1.2801382	1.3695304	1.3565977	1.1763848	1.0385705	0.8376134	0.9670233	0.7837278	0.7987468	1.0081578	0.76120645	0.9786952	1.1276727
Phase-1 RCT-115	1.1915102	0.8410538	0.88647	0.7079575	0.87592884	0.90307033	0.9541503	0.75418587	0.9538415	1.391122	1.3146718	1.880087	1.1535305
Alpha-1 microglobulin/bikunin precursor (Ambp)	1.3774635	1.2516892	1.2349813	1.3297697	1.1395697	0.9529617	1.1076173	1.2322185	0.90777644	0.7694507	0.720578	0.7951389	0.9439417
Phase-1 RCT-18	0.8220249	0.87434715	1.046257	0.89838918	0.95298806	1.0036584	1.0189847	1.1100521	0.8910075	0.890388	0.8864244	0.9972533	1.1789563
Maspin	0.6968923	0.7317828	0.7641593	0.9178989	0.97072333	1.0238215	1.1232387	1.1348431	1.3406206	1.18962	1.1832047	0.9247294	0.754291
Decorin	0.660505	0.7712029	0.789113	0.76916015	0.9849084	1.0033709	1.0458151	1.0402247	1.312553	1.2122358	1.323317	1.2740961	1.0270649
Retinoid X receptor alpha	0.7112421	0.7304942	0.84621376	0.7131659	0.830077	0.87705624	0.8598817	0.8205237	1.2084072	1.0935203	1.0425117	1.1005548	0.89538294
Cellular nuclear acid binding protein (CNBP)	0.94545597	1.0092078	1.1008208	1.0470164	0.9512638	0.8428453	0.89569235	1.3132309	1.1756398	0.7509708	1.0203528	0.91549768	1.0128628
NADPH cytochrome P450 oxidoreductase	1.1493329	1.0152721	0.9448128	0.73925378	0.7981552	0.850814	0.8988132	0.82880343	0.94281307	1.8687854	1.2272267	1.8059307	1.1564857
Malic enzyme	0.75292706	0.7161185	0.8310188	0.8071677	0.9027768	2.2406084	0.896698	1.2241528	1.2251814	0.850278	0.9332063	1.1041304	0.84623897
Cysteine C	0.73607665	0.8758698	0.9522494	0.7750774	0.8778385	1.006391	1.0884842	1.0207813	1.6244497	1.1240898	1.0100173	1.2985222	0.84623897
Phase-1 RCT-151	0.73549545	1.252816	1.0925428	1.2398077	1.2353816	0.9857469	0.987132	0.89028535	1.2283502	0.8940858	0.80875427	0.86614464	0.9087757
p55CDC	0.81608346	1.1891092	1.0034987	0.79962296	0.98242458	1.0494255	0.8441118	0.87032235	1.3508259	0.86003	1.0656991	1.1836067	0.8787461
Poly(ADP-ribose) polymerase	0.81474173	1.0504817	0.90737373	0.8445983	0.94171538	0.9444118	0.87032235	0.8707813	1.1338184	0.9027973	0.94517374	0.9628401	0.85115886
Tissue plasminogen activator	0.9168996	0.9471833	1.048176	1.099658	0.9635774	0.94959845	0.96014086	0.963283	0.7167196	1.1304964	0.8147285	0.9121864	0.81769284
Mitochondrial protein-1	0.7047332	0.8350781	1.0028583	0.81047344	0.8603245	0.83470256	0.7430389	1.0733379	1.2291088	1.3661746	1.3389136	1.3889136	1.0868814
Phase-1 RCT-207	0.92847365	0.96471683	0.9595952	0.8372601	0.9713334	0.95651635	0.9677216	0.9684756	1.2306519	1.1014981	1.0934128	1.2980397	1.0815156
Phase-1 RCT-181	0.9112537	0.9037513	0.90312463	1.016117	1.0638723	0.94185567	1.0439256	1.0898425	0.962574	0.8089707	0.6443517	0.77588856	
Gap junction membrane channel protein beta 1 (Gib1)	1.2486413	0.5707518	0.7653135	0.81647993	0.8716888	0.85918306	1.6413105	1.5350022	0.6861933	0.9155888	1.1650015	0.8603168	1.1162343
Aquaporin-3 (AQP3)	0.81872905	0.75134614	0.9689041	0.9698411	0.98920834	0.9813522	1.1888489	0.96648818	1.1888489	1.1968999	1.0089343	1.27768	1.2750177
Myelin basic protein	0.7648559	0.80887328	0.9089548	0.76126616	0.6950535	0.6331081	0.54077116	1.1248947	0.91224706	0.9896626	1.043417	1.1976956	
Calgranulin B3	0.9087254	1.0142208	0.91030234	0.86890733	0.86092105	0.98386747	0.9552508	1.0926272	1.1859889	1.2281487	1.1143667	1.265327	1.0469623

Table 30

Phase-1 RCT-156		0.8726671	0.87814736	1.2154782	0.8523893	0.65108424	0.8845373	0.7101352	1.5183182	0.8132113	0.81283817	0.91389316	0.7885027	0.8890437
Protease activator 28 alpha		1.1980241	1.3711619	1.1556495	1.0894928	0.9242798	0.9444918	0.86388617	0.8069977	0.87601148	0.86841455	0.89600354	0.8876112	0.89585407
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).														
(2) Compound and dose abbreviations as in Table 1.														
(3) Individual animal number														
(4) Liver inflammation classification for compound dose group at 72 h: yes=incr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed														
(5) Predictive gene (as in Table 23 and as included in Table 26)														

Table 30

Table 30. Expression Data for 72 Hour Timepoint																	
Compound-Dose (2)																	
Animal Number (3)	PUR 150	PUR 150	PUR 150	PUR 38	PUR 38	PUR 38	PUR 38	QUIN 100	QUIN 100	QUIN 100	QUIN 25	QUIN 25	QUIN 25	QUIN 25	QUIN 25	STRZ 20	
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	
Gene Name (5)																	
Phase-1 RCT-107	0.82606524	1.0469544	1.4866251	1.0183531	1.0666818	0.871295	0.80836776	0.9578157	0.95735437	0.95769568	0.93208534	0.93208534	1.1492205	1.1298818	1.1298818	1.1298818	
Besitine homocysteine methyltransferase (BHMT)	1.0188315	0.7612113	0.708125	2.3014543	1.7721071	1.1815759	1.2339376	0.81978339	0.81978339	0.81978339	0.81978339	0.81978339	0.81978339	0.81978339	0.81978339	0.81978339	
Proinflammatory nuclear antigen gene	1.0127649	1.0709391	1.1722265	0.76602895	0.8016167	1.0207137	0.9196578	1.0265424	1.0265424	1.0265424	0.93651044	0.93651044	0.8949777	0.8949777	0.8949777	0.8949777	
Cytochrome P450 2D18	1.4872073	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	1.4803327	
Cytochrome P450 2C11	1.0710449	1.1291597	1.0730558	0.9673684	1.1497268	1.4182885	0.8903957	0.8945202	0.8945202	0.8945202	0.8413274	0.8413274	0.8413274	0.8413274	0.8413274	0.8413274	
Phase-1 RCT-280	1.0589884	0.7378550	0.7017315	2.0833689	1.6481699	1.1628311	1.1423194	0.83194727	0.83194727	0.83194727	0.83194727	0.83194727	0.83194727	0.83194727	0.83194727	0.83194727	
Phase-1 RCT-280	0.99113965	0.8806128	0.8487184	0.9928631	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	0.89479953	
Beta-actin, sequence 2	0.8398216	0.8630678	0.7455126	0.9399884	1.127659	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	0.97739147	
Phase-1 RCT-292	0.87100514	0.9058021	0.9483326	0.8976203	0.8776519	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	0.91828807	
Pyruvate kinase, muscle	1.2150221	0.9886162	1.1319643	1.2059336	0.9923154	0.98472713	0.985848	1.0054578	1.0054578	1.0054578	1.0054578	1.0054578	1.0054578	1.0054578	1.0054578	1.0054578	
Osteocalcin	1.1184999	1.0224291	1.0411617	1.1582088	1.2378268	1.0670835	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	0.9778085	
Calgranulin B1	1.0218662	1.0522953	0.9148423	1.0303864	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	1.1263247	
Adiponectin	0.6428627	0.60363394	0.6100757	0.8469037	0.8778529	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	0.7727451	
Connexin-32	0.8336243	1.0437558	0.8329732	1.14786	1.2016673	1.0821118	1.3713683	0.9511127	0.9511127	0.9511127	0.9511127	0.9511127	0.9511127	0.9511127	0.9511127	0.9511127	
Phase-1 RCT-109	1.3213788	1.2086131	1.3474108	1.547353	1.2051398	1.2816881	1.180122	0.9772245	0.9772245	0.9772245	0.9772245	0.9772245	0.9772245	0.9772245	0.9772245	0.9772245	
Glycine methyltransferase	0.8900344	1.1283224	0.75005355	1.1337544	1.1775312	0.8234686	0.9241018	0.9406163	0.9406163	0.9406163	0.9406163	0.9406163	0.9406163	0.9406163	0.9406163	0.9406163	
L-glutathione-S-transferase	0.9408085	0.8791272	0.80249556	1.3678078	1.218939	1.2436156	0.8460546	0.7082164	0.7082164	0.7082164	0.7082164	0.7082164	0.7082164	0.7082164	0.7082164	0.7082164	
Phase-1 RCT-258	1.0628664	1.114342	0.8941475	1.474795	1.3814731	1.0318457	1.0292584	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	
Carbonic anhydrase III	2.2843623	2.4452744	1.7625593	1.8758987	3.4181618	2.0260284	1.0292584	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	0.8875947	
Phase-1 RCT-78	0.77107835	1.0635295	0.7660577	0.9534394	1.200843	1.0140271	1.0584497	1.0257162	1.0257162	1.0257162	1.0257162	1.0257162	1.0257162	1.0257162	1.0257162	1.0257162	
Urokinase	0.8277828	0.8301874	0.74231625	1.164835	0.713597	0.9010187	0.90001583	0.90078	0.90078	0.90078	0.90078	0.90078	0.90078	0.90078	0.90078	0.90078	
Insulin-like growth factor I	0.57259303	0.49253388	0.638749	0.891691	0.8300928	0.6881088	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	1.1859654	
Phase-1 RCT-185	1.0235244	0.8541933	0.728698	1.1814091	1.289887	0.9458804	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	0.8851844	
Phase-1 RCT-185	1.0697504	1.2354728	1.068949	1.5215334	1.7321878	1.2824828	0.8807894	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	
Coflin	0.7781025	0.6418414	0.5754041	0.89234123	1.1037228	0.9760078	1.0171808	0.9534397	0.9534397	0.9534397	0.9534397	0.9534397	0.9534397	0.9534397	0.9534397	0.9534397	
Statmin	0.98026506	0.8153889	1.1420785	1.045861	0.7459789	0.9728928	0.9625516	1.0247386	1.0247386	1.0247386	1.0247386	1.0247386	1.0247386	1.0247386	1.0247386	1.0247386	
60S ribosomal protein L6	1.2503052	1.042018	1.3447318	1.2370393	1.2231554	1.1317111	0.8839137	0.932078	0.932078	0.932078	0.932078	0.932078	0.932078	0.932078	0.932078	0.932078	
Calpain I heavy chain	1.0694839	1.0848239	0.947343	1.1390964	1.208268	2.18831	1.0275682	0.9650688	0.9650688	0.9650688	0.9650688	0.9650688	0.9650688	0.9650688	0.9650688	0.9650688	
Collagen type II	0.95716524	0.9560583	1.1351736	0.6468527	0.8628525	0.8883835	1.0091171	0.9705526	0.9705526	0.9705526	0.9705526	0.9705526	0.9705526	0.9705526	0.9705526	0.9705526	
Phase-1 RCT-179	1.1540234	1.0219029	1.1934465	0.98084978	0.8285923	1.027348	0.8642554	1.03769	1.03769	1.03769	1.03769	1.03769	1.03769	1.03769	1.03769	1.03769	
Voltage-dependent anion channel 2 (Vdac2)	1.336384	1.3447627	1.369168	1.3635162	1.3280164	1.265125	1.2895762	1.1234297	1.1234297	1.1234297	1.1234297	1.1234297	1.1234297	1.1234297	1.1234297	1.1234297	
Phase-1 RCT-192	1.0789228	0.9116112	0.8989553	1.0384403	0.9716654	0.8828428	0.8807894	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	1.0060437	
Adrenomedullin translocator 1	1.1308182	0.93692505	1.1067758	0.8415393	0.7013545	0.8657838	0.85152906	1.0314013	1.0314013	1.0314013	1.0314013	1.0314013	1.0314013	1.0314013	1.0314013	1.0314013	
Thymosin beta-10	1.2908969	0.93176544	1.2107594	1.2634848	1.2218758	1.0167028	1.1195984	0.9550267	0.9550267	0.9550267	0.9550267	0.9550267	0.9550267	0.9550267	0.9550267	0.9550267	
High affinity IgE receptor gamma chain (FcεR1gamma)	0.93333817	0.8866077	0.6593808	0.8469642	0.8610163	1.0731874	0.693115	0.9024923	0.9024923	0.9024923	0.9024923	0.9024923	0.9024923	0.9024923	0.9024923	0.9024923	
Gamma-actin, cytoplasmic	0.96587765	0.9414924	0.84759994	1.355278	1.0763812	0.8965104	0.74789784	0.8468082	0.8468082	0.8468082	0.8468082	0.8468082	0.8468082	0.8468082	0.8468082	0.8468082	
Uncoupling protein 2	1.2764351	0.88748328	1.2237755	1.2437594	1.1540362	1.1482759	1.04138	0.9403235	0.9403235	0.9403235	0.9403235	0.9403235	0.9403235	0.9403235	0.9403235	0.9403235	
Phase-1 RCT-34	1.2417206	1.2332436	1.2934813	1.583208	1.4752223	1.2241608	0.8595011	0.8606455	0.8606455	0.8606455	0.8606455	0.8606455	0.8606455	0.8606455	0.8606455	0.8606455	
Phase-1 RCT-31	0.8534578	0.6572805	0.7497885	1.162871	1.0589885	0.833817	1.0721471	0.812595	0.812595	0.812595	0.812595	0.812595	0.812595	0.812595	0.812595	0.812595	
Cyclin D1	1.8311885	1.043888	1.1552342	0.876438	0.77316135	1.1270787	0.82188344	0.9882389	0.9882389	0.9882389	0.9882389	0.9882389	0.9882389	0.9882389	0.9882389	0.9882389	
IgE binding protein	0.92912054	0.814232	0.7649192	1.090609	1.2809106	1.0278891	0.9534714	0.9102278	0.9102278	0.9102278	0.9102278	0.9102278	0.9102278	0.9102278	0.9102278	0.9102278	
Zinc finger protein	0.8214053	0.7578651	0.8787583	0.6431108	0.8004228	0.81589943	1.0059078	1.0487918	1.0487918	1.0487918	1.0487918	1.0487918	1.0487918	1.0487918	1.0487918	1.0487918	
Phase-1 RCT-138	1.0134463	1.0704437	1.0406088	1.0207037	1.0920687	1.0871975	1.1690032	0.895926	0.895926	0.895926	0.895926	0.895926	0.895926	0.895926	0.895926	0.895926	
Alpha-tubulin	1.2002424	0.9943005	1.1848084	0.7300552	0.7783041	1.2686655	0.9885341	0.9461383	0.9461383	0.9461383	0.9461383	0.9461383	0.9461383	0.9461383	0.9461383	0.9461383	
Alpha-polythymosin	0.6833532	0.6320405	0.52345705	0.82138025	0.7783041	1.2686655	0.9885341	0.9461383	0.9461383	0.9461383							

1.0182993	1.1531304	1.3054894	1.0837033	1.1440027	1.1570332	1.0484443	0.9509151	0.9839361	1.1161438	0.9328708	1.0767516	0.8768213
1.1010965	1.1525948	1.2580379	0.7066745	0.7777708	0.9688105	1.0416487	1.0122852	0.9655819	1.0653352	0.9874824	1.0105475	0.9127418
1.0240201	0.8875225	1.0338848	1.0370832	1.3403425	1.2867487	1.0147275	1.0128499	0.98760106	1.0863337	0.9974047	1.2400029	0.9282663
Hypoxanthine-guanine phosphoribosyltransferase												
Tissue inhibitor of metalloproteinases-1												
1.1330237	1.1369479	1.2830403	0.9020682	1.1033915	1.1391195	1.0206884	1.1473837	1.0225059	1.0104771	1.0302726	1.0778519	0.9084363
1.2815533	1.3146147	1.3827901	0.7990486	0.8581573	0.9528937	0.8425953	0.93108536	0.93108536	1.0333211	1.1707402	1.0857637	0.9057637
1.2081898	1.1246084	1.1683386	0.94008304	0.8522189	1.0399787	0.8131252	0.938440506	0.9224003	1.0465451	1.23451	0.933231	0.933231
0.9446513	0.79511267	0.9520005	0.9218938	0.78837043	0.8727814	1.0656454	1.0061794	0.958713376	0.9858883	1.2564561	1.0263562	0.9858883
1.148	1.0036935	1.212705	1.397402	1.015243	1.0826256	0.9277543	1.1383861	0.95202053	0.788013	0.9280884	0.97306234	1.0823162
1.4084346	1.3060991	1.4354932	1.3522873	1.3595903	1.1475215	0.9550368	1.1023302	0.8615427	0.7805191	0.8330043	0.9391849	1.0372654
1.08877	1.0780161	1.4567959	0.6478706	1.2674762	1.1306401	1.0488572	1.1220488	1.0688272	1.0572097	1.019281	1.0588128	1.020416
0.8465804	0.773598972	0.9428268	0.687806	0.7822552	0.877898594	1.0723488	0.9688847	0.9688847	1.0018816	0.9284807	0.9150379	0.9517392
1.0731202	0.937355096	1.0113397	0.8238128	0.6124838	0.9050911	1.0582286	0.9781054	0.9598502	0.8305889	0.716881	1.3352981	1.1375138
14-3-3 zeta	0.8164012	0.83221555	1.1919409	1.3650871	1.1216858	1.0250086	1.0438266	0.97823496	0.830419	1.0105507	1.0359714	1.0488125
60S ribosomal protein L9 (alternate clone 1)	0.2728268	1.26128	1.3868597	1.2438154	1.3093248	0.9371563	0.79791301	0.86964424	1.1143123	0.804201	1.2649281	1.4117148
Beta-tubulin, class I	1.2671131	1.0252182	1.3371798	1.2080355	1.2020082	1.127458	1.0403992	1.0527325	0.9585582	0.85914284	1.0937882	0.8784431
Organic cation transporter 3	1.0112054	0.8008941	1.6900413	1.0390688	0.97159335	1.0793827	0.9738257	0.9096504	0.87168885	0.839336354	0.98931605	1.0151666
Beta-actin	0.847248	0.93722516	1.1494035	0.8079637	0.8732018	0.9789257	1.1298654	1.0659011	0.9557173	1.0421357	1.1553407	1.0324954
Cateptisin S	1.1563157	1.1467545	1.3050604	0.80957067	0.8937318	0.9783131	0.9858123	0.97633321	1.008094	1.051916	1.0871469	0.8494261
Billiverdin reductase	0.7828651	0.78077384	0.96842425	0.97063164	0.8803225	0.9121558	0.93895923	0.96889308	1.0889167	0.773549	1.0663539	0.9525509
Phase-1 RCT-154	1.789872	1.34072563	1.3657157	1.5024742	1.198498	1.2003381	1.0588509	0.86524817	0.9677034	0.9735542	1.0343556	1.0343556
Phase-1 RCT-293	0.8678951	1.0760732	0.9654341	0.9654341	1.054171	0.7754094	0.784186	0.8953222	0.7273845	1.0013689	0.9145897	1.4003973
Armad V	1.3879475	1.158998	1.214154	0.995727	0.814941	1.092444	0.98635624	0.98405325	1.08387	0.9189725	0.9559153	1.144962
Complement factor I (CFI)	1.0694949	1.0592459	1.5654742	1.3544905	1.2214165	1.1278617	1.1634326	1.2780028	0.862168	1.1203046	1.072278	1.2807843
Phase-1 RCT-276	1.258863	1.3368242	1.0391393	1.0597472	1.371829	1.1289854	1.0659011	0.9557173	1.0421357	1.1553407	1.0324954	0.9868373
Tyrosine aminotransferase	1.6940747	1.3450538	1.8039979	0.8581468	1.1710324	1.5633972	0.68458723	0.9312726	0.71145066	0.86474824	0.7747487	0.68370116
Glutathione peroxidase	1.162548	1.284209	1.1041405	1.8379184	1.2842318	0.8947592	1.1804158	1.1632077	1.3581073	1.178212	1.0917387	1.4004441
Hisulin-like glycoprotein	0.8659541	1.0760732	0.9654341	0.9654341	1.054171	0.7754094	0.784186	0.8953222	0.7273845	1.0013689	0.9145897	1.4003973
Carbonic anhydrase III, sequence 2	0.84871867	1.1356813	0.9878999	0.7881258	1.0576476	1.0241748	0.7739806	0.901126	0.682459	0.830132524	0.93811333	1.12221
Phase-1 RCT-192	0.9892469	1.08252763	0.8358960	0.8203378	1.6037515	0.8872049	0.8045918	0.79652584	0.9697097	0.92543754	0.9124113	1.2376041
Transitional endoplasmic reticulum ATPase	0.9900564	0.9205068	0.94838636	0.81708305	0.9169153	0.9887239	0.9378172	1.0155425	1.1186365	0.8381766	1.1629159	1.2763561
Phase-1 RCT-86	0.94905365	0.9875287	0.9182793	0.7609728	0.9533368	0.9532269	0.81153095	0.93498026	0.80444455	1.023022	0.98289875	1.089123
Phase-1 RCT-296	1.28797958	1.2480212	1.2287538	1.5559222	1.0392445	1.007767	1.3769734	1.0168289	1.2748161	1.0527022	1.1845402	1.2117489
Phase-1 RCT-166	1.0445116	1.0778705	1.022807	0.9236474	1.297303	1.1585844	1.1698978	1.3292545	1.5281242	0.8726201	1.1257445	0.9794065
Phase-1 RCT-182	0.3862383	0.9182143	1.3260596	1.1294563	1.1329453	0.9510216	1.026935	0.80510216	1.026935	1.1124355	0.6307143	1.0570762
Phase-1 RCT-168	1.06544	1.005238	1.0805712	1.1993314	1.0198844	1.0041692	1.0447728	0.9674035	1.1242137	1.0821414	0.9294063	1.1374526
Phase-1 RCT-182	0.3862383	0.9182143	1.3260596	1.1294563	1.1329453	0.9510216	1.026935	0.80510216	1.026935	1.1124355	0.6307143	1.0570762
INK1 stress activated protein kinase	0.83477615	0.8363974	0.81328195	1.0042048	1.3094982	0.9184119	0.9294453	0.8284524	0.7118857	0.682459	0.830132524	0.93811333
Phase-1 RCT-41	1.352215	1.6763887	1.4168684	1.5260862	1.7598947	1.414407	1.0881356	0.9096834	0.82265433	0.88485736	1.0065057	1.0065310
Phase-1 RCT-33	0.88209653	0.9177034	0.9877515	1.0939077	1.0090801	0.9917615	1.144661	0.70812476	0.9368734	0.9089275	1.0404282	0.9089899
Phase-1 RCT-178	0.967309	0.7774428	0.8385403	0.8534167	0.8958984	0.8955569	0.9521042	0.95629533	0.7876282	1.2303577	1.1395953	0.98304728
Apolipoprotein CIII	0.787228	0.7774976	0.7482365	0.8898597	1.001025	1.1205373	0.900524804	1.0183423	0.88675141	1.0188723	1.1912019	1.0409358
Phase-1 RCT-48	0.83455896	1.1274978	0.87679124	1.2351783	1.3359181	1.1483765	0.9784575	0.96844064	0.86581733	1.011873	1.073027	0.9329348
NADH-cytochrome b5 reductase	0.9053253	0.93069065	0.9356085	0.9952528	1.1204257	0.9766559	1.0730407	0.9199819	0.85911304	1.0851364	0.882584	0.705171693
Alpha-1, inhibitor III	0.84611453	0.46402636	0.93505185	0.8197227	0.74047023	0.8980303	0.8187034	1.3805497	1.3941651	0.87840058	1.30871513	1.30871513
Phase-1 RCT-233	1.0491087	1.010806	0.828957	0.8758933	0.7974084	1.04771	1.0208065	0.8993804	0.9563673	1.1401753	1.0711728	1.0693347
Paraoxonase 1	0.7415583	0.765952	0.90241164	0.9667587	1.029533	0.82139456	0.9065319	0.93758084	1.080976	0.7414972	0.8478884	0.95918703
Presterilin-1	0.48300534	0.43995678	0.49406428	0.8177002	0.7293739	0.8783389	0.95684085	1.3601305	1.3173036	0.923474	1.0645816	1.0521121
Cytochrome P450 C11	0.86713295	0.8511113	0.83334865	0.917776	1.0104177	1.0345109	1.002847	0.8613769	0.8068767	0.7016537	0.911138734	0.900518935
Apolipoprotein P450 2C23	1.0817442	0.7065978	1.1686884	0.8273016	1.07124846	1.0420182	1.0558982	1.0898992	0.87483007	1.0480505	0.8232789	1.0595959
Phase-1 RCT-227	0.704148	1.13891281	0.77392775	0.9018074	1.4272811	1.01869	1.092821	1.0803473	0.90504784	0.69573785	1.0910878	1.19052044
Hepatic lipase	0.8816928	0.8348481	0.87749776	0.745806	0.7498847	0.7513719	0.828101	0.844889	0.86102873	1.1917485	1.0197465	0.91974604
Phase-1 RCT-164	1.0474497	0.8634072	0.9054821	0.91489327	0.83687593	0.98861157	1.015123	1.0485944	1.077022	0.7295475	1.248504	1.2258368
Phase-1 RCT-164	1.0474497	0.8634072	0.9054821	0.91489327	0.83687593	0.98861157	1.015123	1.0485944	1.077022	0.7295475	1.248504	1.2258368
Insulin-like growth factor-2	1.1651893	1.2226619	1.1709436	0.8318618	0.722165	0.971889	0.9821131	1.0364584	1.0921131	1.0364584	1.0575385	0.9445866
Multidrug resistant protein-1, exon 8	0.86498473	0.77374538	1.0896481	0.8649847	0.953849434	1.2487386	1.0718781	1.3255228	1.285446	0.7834837	0.848972	0.99533105
N-hydroxy-2-acetylaminofluorene sulfotransferase (STC1)	1.2205179	0.934844753	1.08205053	1.1434051	1.2223845	0.8813861	0.9430827	1.1593462	1.0537323	0.63998246	0.8990871	0.95286115
Dynamin-1 (p100)	1.1457201	1.0842416	0.7363155	1.1832037	1.343775	1.2038401	1.0593034	1.0383081	0.8658502	0.956245	1.0382197	0.94853286
Dynamin-1 (p95)	1.2257687	1.2064171	1.3049551	1.0452371	1.271187	1.0848763	1.0252575	0.7286313	0.9039978	0.831584	0.8473798	0.8473798

Phase-1 RCT-173	0.86413403	0.88774544	1	0.68657863	0.82787444	0.9205803	0.97312045	1.182882	1.0816305	1.1017287	1.1501344	1.152211	0.9805056
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.1710309	1.0510105	1.0002911	0.8466367	0.8466367	1.0416236	0.98353736	1.1255294	0.9219541	0.9219541	1.0399281	1.1252348	0.932471
Ribosomal protein L13A	1.3701089	1.0624647	1.2513981	1.5929958	1.3042051	1.1810658	0.9728406	0.9728406	1.0602574	1.0457848	1.296381	0.9763044	0.9206791
Phase-1 RCT-144	1.1121991	1.1004655	0.9910758	0.9990613	0.8876997	1.0390138	0.9592141	0.9592141	0.9807126	1.033265	0.9472864	1.010063	0.9206791
CH-1ra	1.0246978	1.1116841	1.2630117	1.0662985	1.0416999	0.97171617	0.97171617	0.97171617	0.97171617	0.97171617	0.97171617	0.97171617	0.97171617
Vesicular monoamine transporter (VMAT)	1.0342048	1.1414992	1.0415913	1.0214039	1.0845035	1.0284392	0.95739604	0.95739604	0.95739604	0.95739604	0.95739604	0.95739604	0.95739604
Phase-1 RCT-273	0.8655388	0.8200508	0.9843988	0.8085707	0.7908336	0.9092654	0.809096	0.809096	0.809096	0.809096	0.809096	0.809096	0.809096
Phase-1 RCT-230	0.9865127	0.946827	0.9231017	0.82712156	0.8046579	0.8394394	0.8545849	0.8545849	0.8545849	0.8545849	0.8545849	0.8545849	0.8545849
Phase-1 RCT-14	0.8104232	1.1865545	0.85152155	0.89251044	1.011436	1.0106441	0.94258014	0.94258014	0.94258014	0.94258014	0.94258014	0.94258014	0.94258014
Phase-1 RCT-158	0.97230646	0.91420144	0.8676215	0.95170254	0.82674394	0.95157856	0.77152324	0.77152324	0.77152324	0.77152324	0.77152324	0.77152324	0.77152324
Deoxyribidylase kinase	0.7804348	0.98872495	0.9608854	0.78877813	0.78877813	0.9094584	0.8857552	0.8857552	0.8857552	0.8857552	0.8857552	0.8857552	0.8857552
Inositol polyphosphate multikinase (Ipmtk)	0.935575	0.91776498	0.9008854	0.9219216	0.7716512	0.9723719	0.9019488	0.9019488	0.9019488	0.9019488	0.9019488	0.9019488	0.9019488
Neuronal cell adhesion molecule (NCAM)	0.90864095	0.8864135	0.87017354	1.065391	0.8207015	0.94685537	0.92947425	0.92947425	0.92947425	0.92947425	0.92947425	0.92947425	0.92947425
Hepatocyte growth factor receptor	0.8127052	0.7746848	0.7208036	0.895393	0.895393	0.78930324	1.1871877	1.1871877	1.1871877	1.1871877	1.1871877	1.1871877	1.1871877
Empty	0.973617	0.877167	0.8721921	1.0947464	1.0798851	1.010331	0.8103048	0.8103048	0.8103048	0.8103048	0.8103048	0.8103048	0.8103048
Dopamine receptor D2	1.1172834	1.3028952	1.2032921	1.730439	1.5182401	1.131878	0.97831445	0.97831445	0.97831445	0.97831445	0.97831445	0.97831445	0.97831445
Phase-1 RCT-51	1.0255342	1.0342028	0.8696381	1.4374405	1.0743687	1.0092877	0.88268423	0.88268423	0.88268423	0.88268423	0.88268423	0.88268423	0.88268423
Four repeat ion channel	1.2761863	0.95707256	0.8655215	0.8749007	1.0002033	0.9601191	0.8029827	0.8029827	0.8029827	0.8029827	0.8029827	0.8029827	0.8029827
Adrenomedullin	0.784414	0.9911876	0.8943716	0.72775674	0.7337951	0.7603338	0.720072	0.720072	0.720072	0.720072	0.720072	0.720072	0.720072
Caveolin-3	1.0281442	0.8650953	0.82673975	0.8260643	0.8653319	1.060433	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225
Phase-1 RCT-120	0.988648	1.0233033	0.92873975	0.9280643	0.8653319	1.060433	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225	0.8615225
Phase-1 RCT-84	0.92717737	0.9577047	0.94766626	1.0021082	0.89070976	0.97029626	0.90083164	0.90083164	0.90083164	0.90083164	0.90083164	0.90083164	0.90083164
Sarcoplasmic reticulum calcium ATPase	0.8000683	1.021398	1.255124	0.84217866	0.7910371	0.9100812	0.900783	0.900783	0.900783	0.900783	0.900783	0.900783	0.900783
Phase-1 RCT-78	0.13707	0.9678593	0.9526849	1.0419552	0.91735506	0.9286455	1.031671	1.031671	1.031671	1.031671	1.031671	1.031671	1.031671
Phase-1 RCT-252	0.951701	0.7071947	0.7102009	0.9553104	0.96115255	0.9841404	1.0401349	1.0401349	1.0401349	1.0401349	1.0401349	1.0401349	1.0401349
Phase-1 RCT-151	1.085588	0.8653009	0.8340305	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753	0.9270753
Phase-1 RCT-70	0.9691556	1.218983	0.8304035	1.1247804	1.1258876	1.0445757	1.320622	1.320622	1.320622	1.320622	1.320622	1.320622	1.320622
Phase-1 RCT-180	0.70903087	1.011688	0.9830305	0.9927857	1.1063768	1.0097207	0.9701609	0.9701609	0.9701609	0.9701609	0.9701609	0.9701609	0.9701609
25-hydroxyvitamin D3-1 alpha-hydroxylase	0.89578748	1.0163624	1.128827	0.6840689	0.61768878	0.8097405	0.9480184	0.9480184	0.9480184	0.9480184	0.9480184	0.9480184	0.9480184
Phase-1 RCT-119	0.41970706	0.73717133	0.43270722	0.98524755	0.81620487	0.82911503	0.9278121	0.9278121	0.9278121	0.9278121	0.9278121	0.9278121	0.9278121
Peroxisomal 3-ketothiol-CoA thiolase 2	1.0140221	1.002069	1.1233325	1.0759414	1.11788	1.0929551	1.2500801	1.2500801	1.2500801	1.2500801	1.2500801	1.2500801	1.2500801
Phase-1 RCT-146	0.9304407	0.8508175	1.0312347	0.8980339	0.82658414	0.85899293	0.85899293	0.85899293	0.85899293	0.85899293	0.85899293	0.85899293	0.85899293
Superoxide dismutase Mn	1.2351783	1.3241412	1.2916013	1.3172843	1.5252785	1.206582	1.1780657	1.1780657	1.1780657	1.1780657	1.1780657	1.1780657	1.1780657
Phase-1 RCT-115	1.247656	1.288404	1.277959	1.3944594	1.1703907	1.075878	1.0241059	1.0241059	1.0241059	1.0241059	1.0241059	1.0241059	1.0241059
Alpha-1 microglobulin/bikunin precursor (Ambp)	1.3794248	1.4971727	1.4347867	1.468111	1.7822391	1.4725221	1.1625497	1.1625497	1.1625497	1.1625497	1.1625497	1.1625497	1.1625497
Phase-1 RCT-18	1.0287815	0.85278926	1.0005987	0.88541286	0.9044365	1.0232568	0.9049889	0.9049889	0.9049889	0.9049889	0.9049889	0.9049889	0.9049889
Maspin	0.7388975	0.89546474	0.9210596	0.85069627	0.9310392	0.83769789	0.86511604	0.86511604	0.86511604	0.86511604	0.86511604	0.86511604	0.86511604
Decorin	0.9734114	0.9175974	0.8842502	0.9057184	0.65175086	0.8264873	0.82155263	0.82155263	0.82155263	0.82155263	0.82155263	0.82155263	0.82155263
Retinol X receptor alpha	0.8497679	1.0480015	1.0281593	0.96404104	0.68201843	0.92400748	1.0573285	1.0573285	1.0573285	1.0573285	1.0573285	1.0573285	1.0573285
Cellular nucleic acid binding protein (CNUBP)	1.1158652	1.130784	1.1536142	1.1916387	1.4181591	1.3110592	0.99999994	0.99999994	0.99999994	0.99999994	0.99999994	0.99999994	0.99999994
NAUPH cytochrome P450 oxidoreductase	0.9365457	1.04804	1.0045353	0.8562603	1.033585	1.1150255	1.0308007	1.0308007	1.0308007	1.0308007	1.0308007	1.0308007	1.0308007
Malt enzyme	0.71887573	0.81467354	0.6530443	0.5381083	0.61000264	0.78400207	0.9117883	0.9117883	0.9117883	0.9117883	0.9117883	0.9117883	0.9117883
Caspase 1	0.89428715	0.81834694	0.8928783	0.8103687	0.61144173	0.97763524	0.9159287	0.9159287	0.9159287	0.9159287	0.9159287	0.9159287	0.9159287
Cystatin C	1.0688258	1.05238	1.182687	1.2226878	1.2173318	1.1449918	1.0688005	1.0688005	1.0688005	1.0688005	1.0688005	1.0688005	1.0688005
p53QDC	1.1121769	1.2986013	1.4052888	0.74149704	0.8045712	1.122785	0.8622025	0.8622025	0.8622025	0.8622025	0.8622025	0.8622025	0.8622025
Poly(ADP-ribose) polymerase	0.80748025	0.8737869	0.9390088	0.8947692	0.9946399	0.9898993	1.0391628	1.0391628	1.0391628	1.0391628	1.0391628	1.0391628	1.0391628
Tissue plasminogen activator	1.1177018	1.0212727	1.1875948	1.317348	1.8416704	1.0669353	0.9865545	0.9865545	0.9865545	0.9865545	0.9865545	0.9865545	0.9865545
Multidrug resistance protein-1	1.0469954	1.23871	1.148999	0.7471559	0.78916824	1.0102826	1.043311	1.043311	1.043311	1.043311	1.043311	1.043311	1.043311
Phase-1 RCT-207	1.0633217	0.95114125	1.0384044	1.2777399	0.73226383	0.8810274	1.0045472	1.0045472	1.0045472	1.0045472	1.0045472	1.0045472	1.0045472
Phase-1 RCT-181	0.92414075	0.9035757	0.8803963	0.91152227	0.94651586	0.97784208	0.9915869	0.9915869	0.9915869	0.9915869	0.9915869	0.9915869	0.9915869
Gap junction membrane channel protein beta 1 (Gjb1)	0.98518455	1.4510382	0.8943363	1.3516486	1.3471562	1.1951383	1.6567571	1.6567571	1.6567571	1.6567571	1.6567571	1.6567571	1.6567571
Aquaporin-3 (AQP3)	0.8382462	1.0349002	0.8198867	1.0735567	0.97460884	1.013484	0.9285014	0.9285014	0.9285014	0.9285014	0.9285014	0.9285014	0.9285014
Myelin basic protein	1.1272926	0.9723873	1.2092689	0.99300146	1.030323	1.012126	1.0655224	1.0655224	1.0655224	1.0655224	1.0655224	1.0655224	1.0655224
Calgranulin B3	1.0238927	0.8908346	1.0582463	0.75825383	0.78420873	0.84370476	0.9628117	0.9628117	0.9628117	0.9628117	0.9628117	0.9628117	0.9628117

Table 30

Phase-1 RCT-156 Proteasome activator 28 alpha	1.0500057	1.1632013	1.1726009	1.0469619	1.1144736	1.2219226	1.0381737	0.9988454	1.1244341	1.1844106	0.9420844	0.9397828	1.0522237
	1.0820715	1.0357689	1.218517	0.73730685	0.78665686	0.857769	1.0430508	1.0859379	1.0534103	0.9407848	0.9647898	0.833888	0.8018816
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 hr: yes=ncr, necrosis observed; yes=bn, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint (1)													
Compound-Dose (2)	STRZ 20	STRZ 75	STRZ 100	STRZ 150	STRZ 200	STRZ 250	STRZ 300	STRZ 350	STRZ 400	STRZ 450	STRZ 500	STRZ 550	STRZ 600
Animal Number (3)	1728	1729	1730	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740
Liver Toxicity Inflammation Classification (4)	no	no	no	no	no	no	no	no	no	no	no	no	no
Gene Name (5)	no	no	no	no	no	no	no	no	no	no	no	no	no
Phase-1 RCT-107	1.4496994	1.1263631	1.251772	0.9089215	1.2008614	0.86277187	0.96121514	0.9168518	1.1506951	0.8184288	0.8235434	0.6898616	0.6291339
Betaine homocysteine methyltransferase (BHMT)	0.7121674	0.7502847	0.76191616	0.680189	1.256894	0.37196717	0.40012684	0.3756628	0.3859197	0.8091702	0.36628702	0.50009704	0.2574518
Proliferating cell nuclear antigen gene	1.229071	0.8533623	0.7496585	1.0721165	1.0721165	0.3164668	1.1693229	1.1693229	1.1693229	1.0259456	1.0431465	0.7841168	0.7591012
Cytochrome P450 2D18	0.78579705	1.268232	1.6568328	1.7088546	1.9524769	0.9329941	0.9612028	1.0300053	1.0788837	0.83334833	1.0165122	0.5751232	0.70265986
Cytochrome P450 2C11	0.8320344	0.9201089	0.95845194	0.8527443	1.0354841	1.7224123	1.015075	1.015075	1.015075	1.2024767	1.1388784	0.8542774	0.800182
Phase-1 RCT-290	1.216917	0.8891508	0.6608264	0.788781	1.053919	0.5143609	0.51173097	0.5410875	0.60283045	0.836684	0.9041629	0.65257305	0.4168931
Phase-1 RCT-59	1.3344548	0.8147755	0.8468358	0.83629133	0.92755234	0.7612529	0.8058969	0.8054134	0.8054134	0.8054134	1.055462	0.90276164	0.7718754
Beta-actin, sequence 2	0.6950991	1.213172	0.9740806	0.81514937	1.1101569	0.9994228	1.034017	1.034017	1.034017	0.950477	0.7893836	1.1876013	0.5892897
Phase-1 RCT-292	1.432822	1.1017989	0.95900625	1.3243382	0.89711565	1.2376605	1.2958425	1.2678335	1.3037096	1.0804348	0.97954935	0.9942551	1.080346
Pyruvate kinase, muscle	2.439358	0.97893566	1.163277	1.0870942	1.2145262	1.0311542	1.319831	1.583705	0.8967425	1.1414819	0.9913544	0.85983366	0.6784725
Osteocalcin	1.2243098	1.2246249	1.0848802	0.85745194	1.1001284	1.2981797	1.4004896	1.4354822	1.1097194	1.4593738	0.9994506	1.4489881	1.111706
Calgranulin B1	1.062466	0.89364225	0.9874293	0.89175445	1.2570667	0.82458875	0.86897606	0.8075859	1.0998076	1.190886	0.83236055	0.64303305	0.8151461
Apolipoprotein AII	0.45918557	0.76945955	0.5246302	0.54772224	0.73745384	0.76844604	0.80289285	0.84635595	1.2374487	0.7449634	0.41286442	0.6477823	0.59176093
Coronin-32	1.4766953	1.3910653	2.3556392	1.7587031	1.5295986	1.075753	0.959167	0.97549515	1.0510248	1.256216	0.9076401	0.6188352	0.70213014
Phase-1 RCT-109	0.74661946	1.011249	1.1535703	0.65542954	0.918185	0.865861	0.9852833	0.9053775	0.94847098	0.85534525	0.8680818	0.92105	1.094187
Glycine methyltransferase	1.2149953	1.6185144	0.8810048	1.083311	1.4365376	0.55437634	0.45158088	0.42897233	1.3097509	0.2859593	0.41286442	0.6477823	0.59176093
L-glutono-gamma-lactone oxidase	0.6279997	0.7593882	0.9619048	1.083311	1.4365376	0.55437634	0.45158088	0.42897233	1.3097509	0.2859593	0.41286442	0.6477823	0.59176093
Phase-1 RCT-256	0.79022014	0.9372141	1.0984083	1.1292363	1.516328	0.9896604	0.86963396	0.84635595	1.8935399	0.84425465	1.1476045	1.8412581	1.6560922
Carbonic anhydrase III	0.9437767	1.558297	1.6383838	2.102971	2.813087	0.90253384	0.18097233	0.23496015	0.7769225	0.8924632	0.8978226	0.85141575	0.7658434
Phase-1 RCT-78	1.0894075	1.118958	1.0511342	1.0353469	0.9074343	0.93430674	0.8236732	0.7782897	0.6504114	0.808902	0.810978	0.98984285	0.808739
Urinary protein 2 precursor	0.49151722	0.819974	0.9257114	1.0413243	0.75764598	0.6818437	0.8439863	0.8779386	0.7782897	0.6504114	0.808902	0.810978	0.98984285
Insulin-like growth factor I	0.48145145	0.7909744	0.9408759	0.8023364	0.85711104	0.7439446	0.6710431	0.84037704	0.73945598	0.9196208	1.197673	0.7747831	1.0408739
AVI sulfotransferase	0.89445097	0.7502548	0.7713219	0.8713459	1.328839	0.80984107	0.6168362	0.9054837	0.50358	0.52618456	0.8176556	0.7225388	0.6489321
Phase-1 RCT-185	0.7080291	1.012323	1.0833444	1.3998512	1.54653	0.9585471	0.9784333	0.9053775	0.94847098	0.85534525	0.8680818	0.92105	1.094187
Collin	0.7707647	1.284621	1.046429	1.228448	0.82813894	0.52644354	0.94033204	0.8176884	0.7769225	0.8924632	0.8978226	0.85141575	0.7658434
Statforn	1.103538	1.0777308	0.99415344	0.8009514	0.83003876	0.813825	1.2253225	1.0666918	0.8192716	0.8924632	0.8978226	0.85141575	0.7658434
6S ribosomal protein L6	0.63565035	0.76350847	0.9032464	0.8792679	0.6968312	1.0040091	1.379538	1.2584774	1.200544	1.1384577	1.045257	1.3809442	1.3787846
Calpactin heavy chain	1.3760517	1.040876	1.0677018	0.9151135	0.94395246	0.8218359	0.9710456	0.9779591	1.0380108	1.240121	0.9534234	1.5026442	1.654438
Collagen type II	0.9237824	1.167401	1.0942684	1.1594627	1.0919645	1.1519681	0.92171925	1.865747	1.0110316	1.9059569	0.9068243	2.6205215	1.3550191
Phase-1 RCT-179	0.269812	1.1213828	1.0825669	1.2493532	0.85173494	0.9127245	1.0897127	1.0308352	1.2377066	1.200068	1.117788	1.5439694	1.5281963
Voltage-dependent anion channel 2 (Vdac2)	0.8069192	1.551033	1.2538476	1.2769496	1.8037201	0.8177504	0.9489451	0.8780261	1.0451893	0.9835571	0.8530932	1.0777891	0.9765405
Phase-1 RCT-192	0.7784321	1.174935	1.2595568	0.8780023	0.9729429	1.4717685	1.6335589	1.4334843	0.8834151	0.96802225	0.9543006	1.2512774	1.040028
Adenine nucleotide translocator 1	0.58425293	0.7090467	0.8273295	0.91515446	0.7424073	0.8348097	0.91759706	1.842804	0.8037667	0.8037667	0.8037667	1.3489165	1.332421
Thymosin beta-40	0.78056785	0.90529098	0.85670763	0.92834275	0.8103728	0.86879586	0.9775639	1.2343289	0.7926056	0.8731886	0.7348247	0.8376507	0.6533549
High affinity IGF receptor gamma chain (IGFIRgamma)	1.0050336	0.9270305	1.1163305	1.0600115	0.9542303	0.89025205	1.0058405	1.0163703	0.9032592	0.97235125	0.95681	1.3271194	1.1933444
Gamma-actin, cytoplasmic	0.71749103	0.86771125	0.8429455	0.8279779	0.86110904	0.87156883	0.9198636	1.0732131	0.8413016	0.9819978	0.82230145	1.5400298	1.0568148
Uncoupling protein 2	1.248089	1.0078627	1.0294204	0.80225583	0.89146044	1.0232241	1.3010206	1.4715091	0.8838153	1.1049342	0.9874108	0.9206037	0.7332776
Phase-1 RCT-34	0.85875785	1.024133	0.96011	1.046948	0.8664795	1.0281565	0.8787275	0.8048101	1.1548043	0.9251071	0.91514987	0.95053925	1.0875033
Phase-1 RCT-31	0.5528648	1.2754316	1.2060235	1.3732961	1.2191975	0.39521456	0.2868398	0.27345917	0.7322081	0.5778754	0.8550421	1.8156983	2.0410388
Cyclin D1	0.82659537	0.8189215	0.8320983	1.2941844	1.5376081	0.99821475	0.7241426	0.813878	1.0854652	0.9748764	1.3825175	0.74504286	1.2645975
IntE binding protein	1.2080109	0.9735124	1.0107667	0.955668	0.94080573	1.0266514	1.6591253	1.6776943	0.9952369	1.3055383	0.84447917	1.3022168	1.0545781
Zinc finger protein	1.1011443	1.027155	0.8955584	0.7641532	0.7463166	1.0496286	1.0951006	1.14825	0.7126847	0.85786816	0.8031268	1.1451278	1.119525
Phase-1 RCT-138	0.89176284	0.9814513	1.0408947	1.12392	1.0293933	0.89492794	1.1803229	1.645328	0.9653067	1.2801048	0.744866	1.1872692	1.1807027
Alpha-tubulin	0.8482105	0.9138958	0.8728023	0.858475	0.8958774	0.9153651	0.705589	0.9604809	0.812559	0.706495	1.1076217	1.1349818	1.4543841
Alpha-prothymosin	0.6266907	1.0876229	0.97683567	1.2203887	0.6838689	0.47089536	0.5235139	0.5037957	0.7523869	1.0822186	0.9365686	1.2477317	1.2163706
Calpain 2	1.1774316	1.063392	1.1755668	1.0184402	0.3159946	0.97267898	1.0597734	1.0736198	1.0436554	0.8603784	0.94519177	0.8440368	0.77959585
Phase-1 RCT-12	1.001223	1.5404131	1.3102182	1.3638653	1.2503355	1.3638653	1.047711	0.948872	0.9428897	1.0621326	0.9877188	1.263461	1.2709721
Calpain 1	0.6852843	0.91411555	0.9783378	1.2194289	1.0277311	1.189265	1.6034989	1.6338076	0.94427	1.0621326	0.9877188	1.263461	1.2709721
Cathepsin B	0.95328534	1.19277	1.3459278	1.4411497	1.084702	0.8667344	1.0305177	0.92259127	0.845805	0.9162975	0.7855263	1.3247733	0.83267194
Phase-1 RCT-24	1.1674352	0.98137444	1.4166987	0.98261964	0.9821265	0.9789107	1.116495	1.2378613	0.9183864	1.0253241	1.125158	1.5555691	1.7701731
Melanoma-associated antigen ME491													

Table 30

Phase-1 RCT-68	1.2533047	1.0647465	1.1169829	1.12285	1.0047882	1.0575044	1.0417048	1.2534204	1.0384897	1.0096682	1.1518235	1.1310898
Cyclin G	1.3758168	1.0805232	0.92228174	0.8251178	1.0581877	1.3721974	1.3721974	1.8174227	0.80251356	0.8559458	1.0022866	1.0022866
Hypoxanthine-guanine phosphoribosyltransferase	0.8808539	0.9657009	0.76667527	1.0247174	0.8022841	0.8140731	0.8678831	0.85808344	0.7501896	0.746633	0.9289498	0.7473104
Tissue inhibitor of metalloproteinases-1	1.3627948	1.0705994	1.1139794	0.9991511	1.2539666	1.0421947	1.7886073	1.289945	1.0808503	1.0374554	1.027824	1.0207481
ID-1	0.91892274	1.3918084	1.0446715	1.2125318	1.0012558	1.1570505	1.3276099	1.1542871	1.1708597	1.1528189	0.8450687	0.8200442
Ribosomal protein S9	0.6152145	0.7712128	0.89638825	0.9071878	0.9110086	0.8497704	1.1563342	0.95867515	0.89553365	0.8570784	1.3916678	1.1614269
Heme oxygenase	1.0108157	0.7588112	0.723247	0.7678054	0.7686845	0.9629455	2.448657	3.256237	1.0091881	0.9826537	0.9061007	1.9631225
Ribosomal protein S8	0.6286294	0.9370745	1.2287263	1.0586048	1.3383131	0.90501605	1.1816401	1.04294	1.1471692	1.0687653	1.0523475	1.2842228
Ribosomal protein S17	0.5978484	0.8719712	1.3727875	1.053949	1.415281	0.8831791	1.0974076	0.8832308	1.0143608	0.9563243	0.9409505	1.3207368
Nucleoside diphosphate kinase beta isoform	0.76246168	0.9656604	1.3455538	1.2011223	1.11707	1.0604186	1.3778458	1.2760134	0.857432	0.8911983	0.8889328	1.1769778
Phase-1 RCT-121	1.0532557	0.8839463	0.8410542	0.8303798	1.07483074	1.0194052	1.2408221	1.017324	1.0178507	1.0763322	1.0160575	1.2288164
14-3-3 zeta	0.8351129	1.1603336	0.84382615	1.3226041	0.85586184	0.967304	1.0676581	1.0143247	1.0717654	1.0597757	0.9858901	0.7349417
60S ribosomal protein L8 (alternate clone 1)	0.69871885	1.0128478	1.218231	1.0891551	1.21882	1.0048615	1.7631837	1.2550375	1.1244115	1.1356688	1.0619521	1.0949878
Beta-tubulin, class I	0.9259538	1.2314029	1.5150888	1.5823231	1.1758379	0.6779704	0.793546	0.7788321	0.7254347	0.7804047	0.8181874	1.165831
Organic cation transporter 3	1.1575699	0.8524823	0.8168814	0.6862843	0.8270067	1.05086	1.3869711	0.883315	1.1732975	1.1518208	0.7471425	1.2042177
Beta-actin	0.7766707	1.3493251	1.031318	1.1800225	1.0413002	0.86448437	0.9083991	0.84185304	0.81187543	0.77376904	0.7471425	1.2042177
Cathepsin S	0.8455864	0.87610628	1.0534115	0.9474124	0.90041033	0.7817898	1.2957655	1.7207158	0.78902287	0.88368603	0.7496163	1.401231
Bilirubin reductase	1.4077027	1.0098919	0.9844813	1.0074707	0.8906388	1.1662991	1.4580387	1.1771456	1.2455453	0.9391783	0.9715874	0.74546003
Phase-1 RCT-154	1.0221314	0.9922736	0.85791154	1.0314462	0.8160467	0.8836709	0.9492252	0.8650836	0.86552465	0.839142	1.0351454	0.8916537
Phase-1 RCT-293	1.2253299	0.8824394	1.004074	1.0336562	1.0002801	1.2189043	0.262721	1.426573	0.88029345	1.117475	0.8790437	1.1581489
Annexin V	1.1601754	1.0088307	0.98914087	0.96632617	0.94707008	1.3376589	2.8444597	2.8080858	1.1856428	1.3045444	1.0287087	1.0540233
Complement factor I (CFI)	0.8514498	1.1193947	1.1425658	1.2630921	1.2522451	1.8046803	1.9417945	1.7490607	1.8207054	1.819925	1.4600551	1.5241658
Phase-1 RCT-276	0.99591495	1.0939559	0.9866564	1.1630961	0.934892	0.85103734	0.7808158	0.7469436	0.84386628	0.8960112	1.071504	1.1905528
Tyrosine aminotransferase	0.36399058	0.8175408	0.64202464	0.8630356	0.81783425	0.65861624	0.8104436	0.65904287	0.8115178	0.943513	0.9650784	1.2670922
Glutathione peroxidase	0.6466218	0.7022375	1.2702781	0.9025054	1.2256686	1.1439738	0.9335017	0.7109744	1.3489778	1.2491481	1.3844254	1.371212
Histidine-rich glycoprotein	0.57350755	1.172911	0.9460975	1.130361	1.2512642	0.724364	0.7886735	0.759672	0.8800546	0.82926345	0.76448708	1.9239343
Carbonic anhydrase III, sequence 2	0.57219698	1.1070514	0.8472781	1.1055441	0.92258	0.6585263	0.71888727	0.6500583	0.6874665	0.7024907	0.74136	1.9289016
Phase-1 RCT-92	0.78574187	0.9502134	1.1266028	1.2802374	1.1236386	0.69597214	0.7884085	0.71399226	0.84048814	0.8883325	0.8838678	1.5769394
Transitional endoplasmic reticulum ATPase	0.7872375	1.1952288	1.0427284	1.3643146	1.018457	0.94598114	0.8629608	0.9454454	0.91600306	1.0357469	1.4381731	1.2731878
Phase-1 RCT-88	1.0957181	1.0362532	0.8233795	0.9360968	0.81468	0.75064194	0.8538526	0.8284081	0.82001116	0.8100477	0.844365	1.287891
Phase-1 RCT-268	0.57847805	1.0011846	1.113528	1.2107216	1.004723	0.81171054	0.7307633	0.98978163	1.0693653	1.0582715	2.2878185	1.2860033
Phase-1 RCT-181	1.4599282	1.345257	1.2971885	1.6410771	1.9275031	0.80192673	0.6893255	0.645852	1.3328248	0.8102969	1.0429349	1.2793273
Glutathione S-transferase theta-1	0.888731	0.938905	1.1985923	1.18214	1.1561726	0.9495608	1.2030754	1.0211728	0.8764953	0.8055935	0.7282098	1.1528721
Phase-1 RCT-188	0.85872215	1.082380	0.96358055	1.187313	1.0638988	1.2284359	1.589244	1.1805943	0.9259534	1.113821	1.365036	1.0646762
JNK1 stress activated protein kinase	0.8714781	0.95207226	1.0123389	1.0139944	1.0970261	0.9187029	1.0015393	0.9165434	0.7986168	0.8890086	0.9863885	0.7173917
Phase-1 RCT-81	1.197736	1.0085053	0.9978897	1.0686089	1.0378811	1.2528028	1.3537811	1.3868917	1.2653428	1.1780683	0.8691064	1.1021906
Phase-1 RCT-33	0.7302124	0.9235608	0.7809526	1.0752071	0.91781386	0.82092186	0.72633116	0.82442584	0.7086167	0.85333116	0.82297266	1.003576
Phase-1 RCT-178	1.0778543	1.0071913	0.94041374	1.335191	1.2091719	0.7373292	0.6912259	0.7035232	1.2312409	1.0828167	1.0847787	0.32811937
Apolipoprotein CIII	0.7762484	0.8897858	0.76465044	0.85438246	0.78241876	0.68678755	0.4220249	0.47860918	0.763236	0.67471445	1.0837048	0.87092423
NADH-cytochrome b5 reductase	0.8501107	0.9521039	1.1164029	1.3497893	1.5421277	0.9404967	0.97271687	0.7455196	0.9774157	0.8993151	0.82781359	1.0249015
Alpha 1 - inhibitor III	0.5595485	1.2134271	1.2780526	1.3290783	0.5907774	0.96003574	0.5070952	0.4347782	0.97250384	0.9561414	0.8593788	1.2235048
Phase-1 RCT-233	0.870185	1.2240701	1.2186468	1.485175	1.1651438	0.79635886	0.8626088	0.7455196	0.97250384	0.9561414	0.8593788	1.2235048
Paraoxonase 1	0.4953377	0.81501216	1.0867616	1.0182929	1.1741096	0.9570869	0.5024484	0.42912334	0.88431104	1.3124993	1.4446539	1.4148115
Preferilin-1	0.48431504	1.2477808	1.2320577	1.3458834	0.7070613	0.9570869	0.5024484	0.42912334	0.88431104	1.3124993	1.4446539	1.4148115
Apolipoprotein C1	0.5518714	0.8656991	1.1080723	1.2730874	1.0056074	0.5439099	0.3983358	0.5232881	0.6838314	0.666046	0.9507624	0.83008983
Cytochrome P450 2C23	0.48882586	0.8716694	0.705941	0.957099	0.62451535	0.8387928	0.634084	0.67062575	1.0437006	0.823846	1.1085724	1.0080829
Phase-1 RCT-227	0.84578866	1.3600143	1.4718487	1.455554	0.8383043	0.8918488	0.839339	1.2004902	0.9088888	1.075881	1.2714685	1.8463765
Hepatic lipase	0.5178886	0.8442578	0.6504138	0.8178584	0.8081925	0.84646557	0.38716968	0.9759653	0.6916008	0.7827737	0.87700368	1.2863448
Phase-1 RCT-184	0.9007969	0.8893122	0.8671934	0.8671523	0.80521836	0.8423508	0.801901	0.9695075	0.9378017	1.0939037	0.725879	1.04261
Multidrug resistant protein-2	1.1542787	1.3571384	1.6923106	1.8383039	1.1638235	2.868731	1.2983185	0.8097399	0.8808424	1.0684923	0.78353085	0.89088717
Insulin-like growth factor 1, exon 8	0.65317243	1.1393111	1.2216674	1.3841153	1.030838	1.147367	0.74532135	0.813846	1.137138	1.430333	1.5775656	0.59653143
N-hydroxy-2-acetylaminofluorene sulfotransferase (STT1C1)	0.6829965	0.8853972	1.0481176	1.0678874	0.9627896	0.7686885	0.9319687	1.35805	1.020404	1.168144	1.0165205	1.5308821
Dynamin-1 (D100)	1.2564635	1.0753074	0.8846917	1.0697788	0.99029124	1.0162876	0.9652914	0.87729323	1.1671246	0.9740189	1.0277789	0.9733295
DNA polymerase beta	0.8819863	0.8728755	1.0163577	1.0152881	0.7828169	0.8554486	0.8759823	0.88906596	0.7809686	0.8382609	1.0785624	1.2092018

Table 30

Phase-1 RCT-173	1.0653462	1.0307723	1.0301725	1.0011256	0.7684076	0.8844239	0.6755755	0.7045154	0.7386677	0.9336775	0.8849878	0.58981895	0.56984808
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.9839752	0.86413165	0.8349566	0.8347871	0.8277871	0.8844239	0.6755755	0.7045154	0.7386677	0.9336775	0.8849878	0.58981895	0.56984808
Ribosomal protein L13A	0.64423025	1.1365991	1.0387817	1.2039374	0.88034684	0.88034684	1.0182365	1.218399	1.177829	1.1075616	1.1822925	0.9912565	0.8710556
Phase-1 RCT-144	0.9527016	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838	0.9518838
e-H-ras	0.6592824	1.0033635	1.1213766	0.9707037	1.0235733	1.0235733	1.2102475	1.2102475	1.2102475	1.2102475	1.2102475	1.2102475	1.2102475
Vesicular monoamine transporter (VMAT)	1.8427893	0.8024446	0.8024446	0.8024446	0.8024446	0.8024446	1.2627136	1.2627136	1.2627136	1.2627136	1.2627136	1.2627136	1.2627136
Phase-1 RCT-273	1.9655007	0.9046588	0.9046588	0.9046588	0.9046588	0.9046588	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Phase-1 RCT-230	1.5155922	0.8725508	0.8725508	0.8725508	0.8725508	0.8725508	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Phase-1 RCT-74	1.7336878	0.84388775	0.84388775	0.84388775	0.84388775	0.84388775	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Phase-1 RCT-80	1.7317445	0.8616396	0.8616396	0.8616396	0.8616396	0.8616396	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Phase-1 RCT-158	1.7058898	0.8550501	0.8550501	0.8550501	0.8550501	0.8550501	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Deoxyguilidine kinase	1.565471	0.8396175	0.8396175	0.8396175	0.8396175	0.8396175	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Inositol polyphosphate multikinase (IPMK)	1.4263108	0.8901828	0.8901828	0.8901828	0.8901828	0.8901828	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Neuronal cell adhesion molecule (NCAM)	1.8598431	0.803452	0.803452	0.803452	0.803452	0.803452	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Hepatocyte growth factor receptor	1.576471	1.2778569	1.1194214	0.9985434	1.1260455	1.1260455	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Empty	2.573745	0.8063536	0.7497267	0.5280017	0.6183523	0.6183523	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955	0.82035955
Dopamine receptor D2	1.128692	1.0412821	1.0198061	1	1.1668384	0.9321169	0.8541182	0.8541182	0.8541182	0.8541182	0.8541182	0.8541182	0.8541182
Phase-1 RCT-51	1.5059057	0.92371786	0.8534504	0.7833588	0.8505562	1.0242172	0.8667283	1.0588923	1.2744464	1.207853	0.96220404	0.9206566	1.0586276
Four repeat ion channel	1.5996192	0.86133985	0.82939666	0.71188915	0.7765278	0.9535221	0.9131535	0.92742065	0.94842434	0.9588448	0.9616178	0.9011859	1.0090746
Adrenomedullin	2.780282	0.7625768	0.76905	0.5290072	0.588237	1.487252	0.796529	0.93022206	0.9322236	1.1691767	1.0634742	0.84286133	0.7820128
Cardiolin-3	1.663286	0.8786543	0.8545884	0.69133216	0.7628724	0.7631606	0.840807	0.7984282	1.270422	1.1706336	0.9879273	0.800431	0.7385842
Phase-1 RCT-129	1.2623395	1.0078652	1.0048919	0.9087887	0.8496008	1.0778073	1.0746613	1.0801642	1.1159809	1.0055174	1.0424259	1.0631566	0.9626186
Sarcoplasmic reticulum calcium ATPase	1.0679283	0.9036398	0.85823315	0.7598436	1.1025983	1.7203364	2.381474	1.9158992	2.4924848	3.2478817	1.1593529	1.0083236	1.1528994
Phase-1 RCT-78	1.2372392	0.926309	0.874139	0.847807	0.96901454	0.96451557	0.87723065	0.96834296	1.0333091	1.0709682	0.9028548	0.805837	0.861024
Phase-1 RCT-252	0.62150785	0.9000028	0.480181	1.3922187	1.3229312	0.7440509	0.7313243	0.7458872	0.61103475	0.6539742	0.6035383	0.8103404	0.7133346
Phase-1 RCT-151	0.91841625	1.1716304	1.4265943	1.2600534	1.0553516	0.8455338	1.0851207	1.2828091	0.8539	0.98818027	0.839865	1.4451811	1.2417531
Phase-1 RCT-160	0.97865278	1.2625762	1.2085595	1.5403128	0.9432028	1.0063918	0.8583365	0.85448654	0.85525337	1.1274722	1.3788204	0.99407186	0.99294084
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.2275506	0.9124868	1.5987805	0.68842895	1.329887	1.329887	1.1316173	1.0692269	1.0675534	1.3209352	1.0489505	1.180307	0.98560244
Phase-1 RCT-119	0.9182653	0.8941445	0.4940478	0.9300746	1.3129867	0.6213505	0.4842612	0.4878278	0.6257214	0.84018583	0.91653124	0.7731884	0.72561146
Paraoxonase 3-ketoadipyl-CoA thiolase 2	1.4687818	0.9239754	1.1621078	1.2916456	1.5194219	1.3596808	1.026889	0.89927455	1.1438378	1.1478081	1.201283	0.7817896	0.540416
Phase-1 RCT-146	0.8597224	1.1673906	1.2283359	1.2573687	0.8238125	1.0637678	1.2291349	1.1843911	1.2557249	0.9935514	0.98785055	1.0727811	0.94751513
Superoxide dismutase Mn	1.5799432	0.8582829	0.85175476	0.8217802	0.8109299	1.313331	1.4584686	1.508465	1.255735	1.2384073	0.9738292	0.7345451	0.62641656
Alpha-1 microglobulin/bikunin precursor (Amp)	0.59786574	0.68316564	1.0620427	1.2687117	1.2646356	1.2506275	1.3297168	1.1302563	1.35296	1.1573128	1.1587236	1.5047493	1.7301817
Phase-1 RCT-18	1.3034104	0.9144239	0.9674243	0.84276336	0.9888907	1.0377243	0.93852196	0.86646	0.9878955	0.93081686	0.964144	1.0063089	0.95547894
Magasin	1.992184	0.7951463	0.7432608	0.5329777	0.5272413	1.2409912	1.081523	1.1151515	1.123035	1.0069537	1.087245	0.9518349	1.1472563
Decodin	1.384381	1.0109786	0.80538025	0.7800224	1.1386932	1.6511033	2.343542	1.0819242	1.3690999	0.93883187	1.0814681	1.5046585	0.7598302
Cellular nucleic acid binding protein (CNBP)	1.4709884	0.6897778	1.1888591	0.898347	1.4133348	1.1546152	1.247005	1.4608637	1.2313519	1.2019572	0.9863274	0.7784881	0.7598302
NADPH cytochrome P450 oxidoreductase	0.7236202	1.047666	1.0065731	0.8376865	1.2425303	1.0715101	0.93112683	0.87692255	1.0852068	0.8813788	0.78781053	0.7488476	0.64545743
Malic enzyme	1.6479609	1.3840835	1.6843293	1.5863873	1.5421523	1.184034	1.3599778	1.7651683	1.1763656	1.3746304	1.0592004	0.7204332	0.5176284
Caspase 1	0.9507819	0.8243246	0.74503894	0.63748705	0.6909541	0.896182	0.6084838	0.84080384	1.9586587	0.960877	0.86492606	1.8468752	0.901179
Cystatin C	1.391169	0.9265067	0.70651216	0.594935	1.0528087	1.2012771	1.2060353	1.180611	0.88650745	0.87337315	0.96904963	0.83251005	0.88417433
p55CDC	0.7723018	1.0771463	0.9264935	0.6449825	0.8116346	1.0372516	1.0690353	0.89462304	0.8205572	0.9273697	0.7985939	0.8271145	1.1383269
Poly(ADP-ribose) polymerase	1.5314121	0.82314667	0.98179286	0.8388568	0.8421766	1.1473416	1.1384837	1.0765754	0.980684	0.8292823	0.8945008	1.2809577	0.986587
Tissue transimoggen activator	1.2284114	1.3761217	0.9782078	0.9692534	0.83928164	1.037515	1.1384837	1.0765754	0.980684	0.8292823	0.8945008	1.2809577	0.986587
Multidrug resistance protein-1	1.2890865	0.89202774	0.9008345	0.7951425	0.8744884	0.6722749	0.98513436	0.79590844	0.79980068	0.8347278	0.9854415	1.0107998	0.97075254
Phase-1 RCT-207	1.528033	1.3739319	1.062875	1.1807835	1.178935	1.2597905	1.4541641	1.578858	1.0716873	1.0622426	1.0296369	0.9501221	1.0411536
Phase-1 RCT-181	1.0862787	1.0136552	0.91423666	0.8707397	0.7882785	0.74373096	0.75970154	0.8886548	1.0710636	0.97528344	0.87168715	0.6985073	0.6985073
Gap junction membrane channel protein beta 1 (Gib1)	0.9900395	1.0588185	1.0299068	1.053487	0.9805387	0.8340258	1.0365643	1.0004419	0.9666914	1.1693546	1.0292206	0.90301555	1.0538543
2.2668269	1.4648404	1.8545427	1.8545427	1.8545427	1.8545427	1.8545427	0.8040759	0.800899	1.3510662	2.0887377	1.1349847	0.7458276	0.5529166
Aquaporin-3 (AQP3)	1.2247405	0.978438	0.9773159	0.90425	0.9489385	0.82420945	0.8241132	0.7740592	1.1723045	0.9823618	0.8884218	0.9307104	0.9307104
Myelin basic protein	0.8287444	1.284345	0.8324408	1.0989855	0.7845069	1.4769141	0.9007461	1.0771712	1.0425324	1.1275268	0.7440366	0.8278686	0.8278686
Calgranulin B3	1.0960441	1.0093895	1.0819203	1.0424808	0.8578894	0.7895257	0.77740043	0.8004347	0.8144141	1.0197107	0.9896202	1.1492091	0.9835206

Table 30

Phase-1 RCT-158	0.65859467	1.0828391	1.0685302	1.0723513	1.3484487	1.0235306	0.88453835	0.87204933	0.8675014	1.1133417	1.0174173	0.90078086	0.88498644
Protease activator 28 alpha	0.618495	0.7840735	1.1190889	1.2058718	1.3153763	0.9631065	0.8998329	0.7979817	1.6861598	1.3120775	1.1979228	1.0953321	1.3367199
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=ncr; necrosis observed; yes=both; necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 28)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint (1)

Phase-1 RCT-68	1.0762966	1.0083302	1.0496938	1.0318869	0.8983761	1.0374647	1	1.0065248	0.9807117	2.6457624	1.0487605	1.0036353	1.489045
Cylin G	0.99610716	1.0521741	1.1194372	1.1418734	1.0366772	1.0806941	1.0384179	1.0910413	1.119293	5.824327	1.013273	1.7431148	1.989052
Hypoxanthine-guanine phosphoribosyltransferase	0.7851612	0.86514	0.9000345	0.8418974	0.8088522	1.0250284	0.72470764	0.77780473	0.92653954	1.785463	1.0268508	0.700857	1.958962
Tissue inhibitor of metalloproteinases-1	0.970462	1.2834998	1.020465	1.6028903	1.4195144	1.004158	1.006179	1.0373539	1.0328678	3.5175695	0.84168273	0.90762965	1.4098851
ID-1	1.1467612	1.0654523	1.0956721	1.422618	1.2196352	0.9340094	0.92043946	0.97566994	1.0147752	2.033765	1.024542	1.0992246	2.3970327
Ribosomal protein S9	1.2477724	0.93735534	0.588662	0.8926329	0.97400328	1.0420684	1.0118408	1.167902	0.9620038	0.9201094	0.95143974	0.87618876	1.6674106
Heme oxygenase	1.200841	0.6528167	1.7444853	1.0236734	0.376993123	1.1038268	0.98215634	1.4298904	0.9185215	0.510144	0.892728	0.8318708	2.1185217
Ribosomal protein S8	1.8202798	1.9830017	1.4413904	1.0494569	1.0559948	1.0559948	1.1302973	1.1302973	1.0218043	1.8202798	1.1729921	1.2650287	1.4788096
Ribosomal protein S17	1.1531806	1.7718953	1.4940748	0.9610105	0.83107	1.08841	1.2139524	1.1338438	0.9533918	2.8501692	1.3345183	1.1354333	1.747885
Nucleoside diphosphate kinase beta isoform	1.1039891	3.618973	1.146894	1.2287618	0.9815934	0.79048437	0.7442484	1.0012261	1.0170344	1.534274	0.9441694	1.0231937	1.2355189
Phase-1 RCT-121	0.95395845	0.97192407	0.98804647	1.2320987	0.83416945	1.4746771	0.8411131	1.012937	0.8987832	4.4027247	0.8713294	0.95882408	2.1828463
14-3-3 zeta	1.0840305	1.0240328	1.069444	0.74442375	0.577791	0.81506044	0.8570824	1.006263	1.1107837	2.4027247	1.1330043	1.1298517	1.880126
60S ribosomal protein L6 (alternate clone 1)	1.5310894	1.519074	1.2920054	0.9533896	0.7975327	0.964162	1.1205339	1.0460286	1.0043225	2.861791	1.2285621	1.090698	1.2039206
Beta-tubulin, class I	1.2104839	1.1179895	1.0411278	0.8227178	0.8370407	0.7356633	0.95041748	0.73966294	3.4324992	0.9557724	1.2238288	0.9428236	1.2395509
Organic cation transporter 3	1.0855058	1.0958348	1.0445178	0.99805473	0.85874488	0.90203476	1.1487874	1.0349285	1.0532159	2.3108387	1.279594	1.0502512	1.2395509
Beta-actin	0.9357421	0.8470655	0.9997987	0.90323697	0.13116154	0.84941834	0.97066325	0.61449885	0.8459007	4.842202	0.5492648	1.0294207	1.7448947
Cathepsin S	1.0099002	1.0033351	0.81734635	0.81013995	0.69299215	0.7541388	1.0305607	0.9006671	0.9006671	3.3119197	0.8328223	1.0188015	1.22348
Biliverdin reductase	1.80056	1.032008	0.94321644	0.869805	0.9387116	1.2132981	0.84956808	0.97239345	1.0531625	2.3091648	0.9778675	0.9543671	1.569882
Phase-1 RCT-154	0.9997704	1.0661602	0.94181913	0.94405323	0.91479564	1.0487375	0.9222689	0.9511278	0.98280015	5.1616063	1.828655	1.2494447	1.6750766
Phase-1 RCT-293	1.1877835	1.2611177	1.048655	1.0200029	1.001201	0.86381344	0.97954744	0.91795707	1.0324267	3.8202784	0.45342705	0.9803152	1.5458666
AnneXin V	1.2911431	1.2514539	1.1848403	0.9036911	0.88121724	1.0095917	1.1367848	1.1287917	0.96633905	3.7135267	1.1681894	1.0432401	1.5704571
Complement factor I (CfI)	1.6159724	1.0739849	1.2343618	0.80889706	1.1968853	1.0202935	1.1023126	1.0101445	0.9189862	0.73273575	1.7965087	1.1978239	0.8130228
Phase-1 RCT-276	1.280014	1.0403447	1.1712811	0.55859973	0.808551	0.8034075	0.1117321	0.73991119	0.85790074	0.6350248	1.011818	0.42980314	0.8721181
Tyrosine aminotransferase	1.8312124	1.9817472	1.1677318	0.8332087	1.098237	0.978645	0.9311147	1.064845	0.8743975	0.92748374	1.0210332	1.202072	0.3829057
Glutathione peroxidase	1.1163954	1.3905463	1.1022712	0.4685422	0.78085613	0.9734658	0.8902776	0.888618	1.2042095	1.38092233	1.0720653	1.0597347	0.4832543
Histidine-rich glycoprotein	1.0508136	1.1983289	1.0291069	0.921969	0.6292457	0.73586784	0.9586786	0.8303395	1.137629	0.10097827	1.0343015	0.4665637	0.4665637
Carbonic anhydrase III, sequence 2	1.0218896	1.0426212	1.0419922	0.48422742	0.8375349	0.5924706	1.0003986	0.86131406	1.028106	0.2294458	1.1556009	1.0337105	0.5176134
Phase-1 RCT-92	1.0406572	1.014795	0.9807373	0.97111535	1.3344936	1.1284316	1.0936343	1.0285169	1.0283169	1.2542001	1.1516599	1.0644334	0.9498324
Transitional endoplasmic reticulum ATPase	1.0070284	1.1445771	0.9041898	0.8332452	0.66381767	0.8784359	0.9034963	1.1651417	0.702411	0.702411	0.8698943	0.9533603	0.8369214
Phase-1 RCT-286	1.341506	1.0392858	1.1568509	1.1514672	1.185159	1.2025479	1.22387	1.1370386	1.0042018	0.21422482	1.1340615	1.1557175	0.3293602
Phase-1 RCT-161	0.8945236	0.9459911	1.0371429	1.232537	1.1710459	0.9373727	1.076009	1.0294955	1.0598724	0.38030656	1.7075294	0.82842517	0.8940548
Glutathione S-transferase theta-1	1.3034891	0.9414649	0.87573608	0.98316374	0.9270577	1.0920354	1.0981102	1.0568845	0.974966	0.8331312	1.2043787	1.0252804	0.8716608
Phase-1 RCT-168	1.0755368	0.8959928	0.93478954	0.9774451	1.1159157	1.145179	0.9201266	0.8606621	0.9170584	0.4738465	1.11354	1.0888201	0.9784045
Phase-1 RCT-182	1.3942904	1.2155087	1.2161027	0.8297257	1.401577	0.96124095	1.0498518	1.1588117	1.0131623	0.33915165	1.1111659	0.95847076	0.4147441
JNK1 stress activated protein kinase	0.9637426	0.92720026	0.9620226	0.5027485	0.6040309	0.5702724	0.9469242	0.77318877	0.820282	0.6564029	0.8408044	1.018567	0.4206625
Phase-1 RCT-81	1.7022539	1.2768817	1.1115655	1.05873	1.0900852	1.0265693	1.083904	1.066008	0.9835644	1.1211524	0.925862	1.0240374	0.6070271
Phase-1 RCT-173	0.9874969	1.0424186	1.2659005	0.78948718	0.82588685	0.9451405	0.9286394	0.78413236	0.8138803	0.25851768	1.369556	1.183465	0.72903528
Phase-1 RCT-178	0.8819389	0.9135572	1.09939	0.886736	1.3428936	0.996097	1.179924	1.0399135	1.5964214	0.89907374	0.9789644	0.9101871	0.51399773
Apolipoprotein CIII	1.3195881	1.0736172	0.87874778	0.5240913	1.0778145	0.94840634	0.8971593	1.0068559	0.606379	0.93527626	0.8850537	0.33825168	0.33825168
Phase-1 RCT-48	0.9155554	1.0280149	1.0432065	1.0080622	1.0190796	0.8087404	0.88870704	0.9337544	0.8911132	0.6589614	0.9897235	1.0200289	0.95842877
NADH-cytochrome b5 reductase	1.2668693	1.3654342	1.2064373	0.998432	1.069842	0.8957685	0.9089697	0.74767566	0.7203413	0.39180314	0.91461874	0.8935517	0.54672706
Alpha 1 - inhibitor III	1.7462549	0.88843834	0.73198915	0.8669884	1.8370055	0.87756014	1.31717	1.2047548	0.8514047	0.07124573	1.1039336	0.94640857	0.1877394
Phase-1 RCT-233	0.8654237	0.9822013	0.9847973	0.75822395	1.312935	0.87603545	1.027953	0.94552547	0.967144	0.2767272	1.3157395	1.0436983	1.0648409
Paraoxonase 1	1.8155411	1.2211512	1.1625702	0.6069756	1.0078434	0.7086661	1.2592832	1.1042775	1.0396871	0.16703795	1.4374983	1.1509929	0.25229776
Presenilin-1	1.825676	0.9302051	0.79453593	0.79696865	1.713635	0.8057866	1.3594123	1.2228777	0.80358946	1.1590457	1.140016	1.003872	0.24804999
Apolipoprotein C1	1.386585	1.1346854	1.2577755	0.7941084	1.1396707	0.86545885	0.93807054	0.9246763	0.8156323	0.1033437	1.0678221	0.6128926	0.2121816
Cytochrome P450 2C23	1.2574508	0.8773043	0.9488844	0.47461703	0.72932	0.6952624	1.0245901	0.94748254	1.129816	0.5139121	1.029516	0.95743935	0.23021214
Phase-1 RCT-227	1.2112894	0.98546356	0.8918173	0.73284324	0.73554003	1.0971093	1.0245901	0.94748254	1.129816	0.5139121	1.029516	0.95743935	0.23021214
Hepatic lipase	1.0104914	0.85162207	0.9483818	1.3517094	1.038816	1.0109447	0.8613547	0.99722015	0.3895932	1.028862	1.1595912	0.4615449	0.4615449
Phase-1 RCT-164	1.350017	1.1653787	1.1581671	1.0118933	0.9626233	0.93672474	1.2071443	1.2934826	1.2337112	3.0546223	0.9825526	1.1341027	6.224701
Multidrug resistant protein-2	0.90729394	0.9786793	1.0983737	1.154781	1.0983737	1.395596	1.0653433	0.6909702	1.160313	0.2431111	1.2470008	1.0872983	0.30614975
Insulin-like growth factor 1, exon 6	0.93333334	0.9796803	0.95220596	0.80340345	0.87273636	0.65433506	1.0620472	1.1327052	1.035708	0.14751406	1.174153	0.7840873	0.30461538
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)													
Dynamin-1 (D100)	0.9105951	0.9822013	1.0236951	1.0144533	1.1476348	0.9367623	1.064125	1.034231	1.023758	0.8436846	0.99490108	0.9873377	0.856271
DNA polymerase beta	0.8739393	0.9756229	0.9919983	1.0021547	1.0895666	0.72944204	0.9802901	1.0476221	1.0282393	1.5582727	1.1028605	0.990288	1.1696616

Table 30

Phase-1 RCT-173	0.95165336	0.9716809	0.90670294	1.0700729	0.7674911	1.122707	1.0032647	0.8746993	0.90346014	1.8045489	0.88033444	1.055568	1.1845385
Ubiquitin conjugating enzyme (RAD 6 homologue)	0.96017855	0.868466	0.89355726	1.0781785	0.8898912	1.0402838	0.9699254	1.1419804	1.0407068	1.8117871	1.3771887	1.0201104	1.5829968
Ribosomal protein L13A	0.7612542	1.2404103	0.9908006	0.7745433	0.47414928	1.3884991	0.86420146	0.7492341	0.91084124	1.5971133	0.6950438	0.85711434	1.4593918
Phase-1 RCT-144	0.96970836	1.0231075	1.0170606	1.153113	1.2845808	1.1830295	0.94347733	0.8473355	0.9873355	2.0800968	0.9634981	1.0041808	1.6237742
C-Hra	0.98406255	0.9408812	0.9847973	1.0648295	0.7538216	0.7084332	0.8366082	0.8871718	0.9325152	1.2325865	1.1382033	0.9623399	1.4890088
Vesicular monoamine transporter (VMAT)	1.04865538	0.99715423	1.0182433	1.2810234	1.3810234	1.2317607	1.1759579	1.111838	1.0872504	0.8729928	0.8712503	0.96802787	0.8468857
Phase-1 RCT-273	0.89146197	0.9411568	0.9494047	1.2884878	1.1896381	1.1856071	1.1573572	1.0428314	1.0341088	1.2681393	0.8485072	1.016222	0.9919695
Phase-1 RCT-230	0.887592	0.9862012	0.9852841	1.4278322	0.9798917	1.3452677	0.9182398	1.0318762	0.9460511	1.32487206	0.8719579	0.93551735	1.1565778
Phase-1 RCT-74	0.88121684	0.9868673	0.96484375	1.4639368	1.2601414	1.0943466	0.8183198	0.9846434	1.0821908	0.90335733	0.8923093	0.92751735	1.1085714
Phase-1 RCT-40	0.8913371	0.9517279	0.9415761	1.5644755	1.322105	1.171072	0.955543	0.95523	1.0844916	1.0776526	0.822389	0.9080773	1.0803314
Phase-1 RCT-150	0.9462369	1.008764	1.0390625	1.2152017	1.10442	1.1017667	0.76040876	1.035835	1.124908	4.2410417	0.925718	0.9721186	0.8731761
Deoxyxylidase kinase	1.0135449	0.97121628	1.0226669	1.4028988	1.231803	1.1288147	1.0142738	1.1222107	0.9574661	0.8312884	0.9800598	1.0280246	1.0884027
Inositol polyphosphate multikinase (Ipmlk)	0.9206704	0.8286588	0.9739564	1.3925717	1.1180486	1.0721982	1.088673	1.16862514	1.1869211	1.1834978	0.90912575	0.9530264	0.89189584
Neuronal cell adhesion molecule (NCAM)	0.95500404	0.9021306	0.95746076	1.7084793	1.3488778	1.3623383	1.068824	1.0134085	1.0554141	1.1349478	0.9194671	1.0042472	0.81104948
Hepatocyte growth factor receptor	0.828281	0.963258	0.81341577	1.485481	1.1039609	1.1770966	0.80671537	1.0682958	1.1088482	1.1636546	0.8510517	1.0339537	1.0728962
Emg	0.8686138	0.8396603	0.9594843	1.24788	1.0794231	1.7080884	0.9115808	0.977351	1.0774258	0.8577579	0.73894595	0.7877894	1.129207
Dopamine receptor D2	1.1332144	1.0871184	1.0668121	1.2894506	1.3147619	1.1041809	1.1351886	1.0758246	1.0476219	1.5507066	0.8609612	1.073375	0.83362564
Phase-1 RCT-51	0.9498688	1.0109798	1.0139664	1.3345854	1.0507722	1.1038111	1.0231339	0.9894246	1.0034262	1.0531255	0.8705174	0.8963374	0.8170161
Four repeat ion channel	0.8896988	0.9800785	1.0289581	1.2961256	1.1576663	1.0787414	0.9007571	0.89352455	0.9187874	0.9018641	0.8231532	0.9495195	1.1072846
Adrenomedullin	0.87814643	1.0365272	1.0294312	1.7871134	1.3390905	1.8316447	1.0403446	1.0000163	0.9913239	0.7731136	1.1572193	1.0625817	1.0914279
Caveolin-3	0.88523555	0.9585362	0.96168154	1.2989674	1.096428	1.1072905	0.91008747	0.99904203	1.0666497	0.8368977	0.8998797	0.9789458	1.0974325
Phase-1 RCT-129	0.8937638	0.9056168	0.97650256	1.3687991	1.2180899	1.002212	0.88907085	0.9947053	1.0703158	1.0486048	0.8860694	0.96820176	1.1709007
Phase-1 RCT-44	0.77885914	0.9662012	1.0472383	1.0164987	0.9553307	1.0529348	0.7398597	1.0046676	1.0284792	0.9069045	0.8688324	0.93827534	1.1502681
Sarcolemmal calcium ATPase	0.75847185	0.98769754	1.0726143	1.0868808	1.1384501	1.0187454	1.0103384	0.9826551	0.9158528	0.97828746	0.90780854	1.0058168	0.774247
Phase-1 RCT-79	0.851308	0.9808025	0.9801282	1.2328844	1.0347838	1.1844233	1.0171131	0.9596023	0.9428355	1.0025806	0.9488557	0.9030903	0.8948855
Phase-1 RCT-252	0.9926504	0.9124808	1.0185717	1.34081054	0.9594075	0.48684322	1.047982	0.9637743	0.92307204	1.1332877	0.91882175	1.0811228	0.89776084
Phase-1 RCT-151	1.2927412	0.939437	0.96043116	1.1686335	0.85737324	0.985237	0.9594593	0.86979765	0.91872576	0.9187336	1.0947278	1.0370947	0.7606024
Phase-1 RCT-70	0.77876743	0.9120441	1.0383821	1.0414852	0.9081478	0.7635987	0.8719592	1.0527443	1.2310932	0.91735166	0.9943062	0.9002088	0.9002088
Phase-1 RCT-150	1.0392673	0.65140426	0.8251092	0.75426245	0.5534186	0.870313	0.8874271	0.78878786	0.9602188	0.60146948	0.8913882	0.95831066	0.6984111
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.0126282	1.0451218	0.9484854	1.3647768	1.2347768	1.259316	0.83515835	1.095757	1.1171689	0.85498944	1.0176842	1.165375	1.0176842
Phase-1 RCT-119	0.9359882	0.9344888	0.9789737	0.98919304	0.83278	0.5907298	1.129554	1.0548764	0.83397483	0.9105333	1.00114	1.0818758	0.7546664
Peroxisomal 3-oxoacyl-CoA thiolase 2	0.80576205	0.7263287	0.65550168	0.84562224	0.73717268	0.9359862	0.89041533	0.8454504	1.0732415	0.594483	0.85315883	1.0044627	0.87621195
Phase-1 RCT-146	0.81647774	0.9609233	1.0642656	1.2048298	0.996078	1.131492	0.8203827	0.88701198	1.0537322	1.3023203	0.97946125	1.0101681	2.546177
Superoxide dismutase Mn	0.7630374	1.0990644	0.91487277	0.69050217	0.6731976	0.89450223	1.0672711	0.991136	1.054601	1.9683182	0.8576519	0.9697692	1.1260387
Phase-1 RCT-115	0.61067706	0.8475915	0.8801274	1.3924412	1.021683	0.8034125	0.79630697	0.9152682	0.8337683	1.1357371	0.91542873	0.9528876	1.1443897
Alpha-1 microglobulin precursor (Ampb)	2.037957	1.2879493	1.0719204	0.90836154	1.0652538	0.95716834	1.0485048	1.036838	0.807788	0.25738694	1.3825171	1.040016	0.36688413
Phase-1 RCT-18	0.91858724	0.98824387	0.97226334	1.2089298	1.186526	1.0840464	0.9211856	1.0574085	1.0320691	0.9530984	0.9412476	0.953548	1.0784921
Masspin	0.78846358	0.9857278	0.98625854	1.8884578	1.2804146	1.2873844	1.055354	1.0241171	1.0377299	0.8513475	1.046587	1.0264612	0.91785355
Decorin	0.906377	0.9349268	0.88214287	1.3085046	1.0649774	1.0578428	0.9939834	0.8943721	0.8762072	0.823612	0.8943465	0.99949787	0.9587497
Retinoid X receptor alpha	0.7887783	0.97829159	1.0189103	1.5880176	1.174696	1.174737	1.0683852	1.1163865	1.1113155	1.195314	0.86887255	1.1269948	1.2815828
Cellular nucleic acid binding protein (CNBP)	0.9340382	1.0724539	1.1207162	0.7602858	0.4625703	0.8822683	0.96162796	0.9690078	0.95437056	1.0533688	1.1605233	0.9758877	0.8101385
NADPH cytochrome P450 oxidoreductase	0.84047323	0.7725889	0.8178517	1.4135842	0.91977068	0.9522435	0.81730705	0.9270915	1.0199791	1.3213611	0.87281646	1.028517	1.672433
Malic enzyme	1.0451857	0.980789	0.9589178	0.88937845	1.0583738	0.93982485	1.1251744	1.0721167	1.117616	0.6056124	1.483661	1.2558788	1.0458084
Caspase 1	0.758474	0.94273718	0.96891185	1.8084683	1.288377	1.2347895	0.8208087	1.0014759	1.0324082	2.414473	1.0320374	0.97888005	1.012462
Cystatin C	1.5483481	1.1487845	1.0577943	1.0357397	1.2985428	1.2420752	1.3577491	1.121083	1.0634598	2.4716213	1.0397563	0.96287503	0.8599725
p55CDC	1.0986887	1.163442	1.1482329	1.2779105	1.1327894	1.2728614	0.987465	1.0401802	1.0425576	0.8230972	1.0672808	1.0525162	0.9872005
Poly(ADP-ribose) polymerase	1.0727978	0.8901122	0.8488996	0.86677736	0.85369223	1.0932785	1.0088418	0.8888649	1.1209389	1.8375245	0.9698912	1.0564771	1.6234771
Tissue plasminogen activator	0.6317702	0.97192407	1.0090725	1.0530041	0.89183496	0.90402293	0.940729	0.9459493	0.96751904	1.6528613	0.98751804	0.9546615	1.5977608
Mitochondrial protein-1	1.3331015	1.182368	1.1844878	1.034088	0.95035756	0.9092104	1.3494302	1.2654148	1.2581107	4.341684	1.4502778	1.2420723	0.848787
Phase-1 RCT-207	0.950687	0.9676954	0.9742462	1.0335116	0.94308944	1.0022372	0.689974	0.8070589	0.8824671	4.8788175	1.9436635	1.3676472	1.5422455
Phase-1 RCT-181	1.0177331	1.0119747	0.98874667	1.2686276	1.0055617	1.2039629	0.8837502	0.8973816	0.8523088	0.6523268	0.8523088	0.8523088	0.8523088
Gap junction membrane channel protein beta 1 (Gib1)	0.6486518	0.7488701	1.2057623	2.076668	1.0047126	1.9012182	0.5097248	0.8350858	1.1767844	0.39395824	0.6228019	0.9490517	0.6242424
Aquaporin-3 (AQP3)	0.9224774	0.9893837	0.9996408	0.9209801	1.0895181	1.0166855	0.8394621	0.897264544	0.9600801	0.7852446	0.9437774	1.047214	1.047214
Myosin basic protein	1.0551804	0.7821787	1.0171395	1.5884742	1.1814052	1.1814052	1.5901539	1.1814052	1.5901539	1.4924711	0.9804694	0.97324928	1.4208928
Calgranulin B3	1.0496648	1.0244253	0.9440789	0.8663518	0.71728505	1.0241956	0.84213456	0.87350196	0.8781803	1.4811111	1.0884368	1.101483	1.0350868

Table 30

Phase-I RCT-156	1.1267285	1.1028656	1.0214286	1.0982322	1.1043661	1.487789	0.862923	1.0271647	0.88272107	1.523145	1.0180381	1.0384649	1.4166278
Protease activator 28 alpha	1.1836909	1.4390863	0.8872422	0.6872541	0.8903173	0.7594857	1.131025	1.1390483	0.8726628	1.3028668	1.0580425	0.90334904	1.0263198
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1.													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes=necr, necrosis observed; yes=both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive gene (as in Table 23 and as included in Table 26)													

Table 30. Expression Data for 72 Hour Timepoint (1)

Phase-1 RCT-68	1.848698	0.98630377	0.85947550	1.20583226	1.25840040	1.31070448	1.35821137	1.27886847	2.21897021	1.50836591
Cyclin G	2.602404	0.98227537	0.822801	1.2064305	1.2476336	0.9808189	0.7112559	2.0406425	2.484721	3.7675575
Hypoxanthine-quinine phosphoribosyltransferase	1.6787766	1.0457658	1.0172098	1.3020821	1.0690909	1.695081	1.9576074	2.0741048	1.4350582	1.4086204
Tissue inhibitor of metalloproteinases-1	1.9978997	1.2665808	1.2583687	1.2432323	1.6583984	1.2128288	0.91675586	1.7800725	2.0878556	1.4620081
ID-1	2.8517833	1.2235331	1.212875	1.1349261	1.2350013	0.87236377	1.1588572	2.0393069	1.1698903	1.2558857
Ribosomal protein S9	1.7230278	0.8471044	1.485629	1.7010472	1.8963332	1.8691975	1.6665059	2.45391	1.5533175	1.2107931
Heme oxygenase	2.093432	3.049268	1.9783903	1.7488586	2.5352668	1.6420211	2.666611	2.9055958	2.5839433	2.1028013
Ribosomal protein S8	1.5453748	0.8142063	1.54534	1.811929	2.391112	2.0316868	3.622021	3.288958	1.626017	2.188103
Ribosomal protein S17	1.5418987	0.7668351	1.3901822	1.068574	2.782068	1.8467163	2.789778	3.1437125	1.938985	2.0189354
Nucleotide diphosphate kinase beta isoform	1.1468763	1.1071787	1.2472758	1.3496953	2.7958554	2.1220007	2.5074408	2.7934353	2.3024597	2.0810084
Phase-1 RCT-121	1.9514631	1.0905589	1.3737518	1.272791	1.4043166	1.2122451	1.2234502	2.0220513	1.4909078	1.8971509
14-3-3 zeta	2.4728498	1.155319	1.4057712	2.007074	1.7307416	1.8510972	2.869237	1.881678	1.8765299	1.2889434
60S ribosomal protein L6 (alternate clone 1)	1.4534042	0.8429734	1.4302766	2.0540235	2.8685959	2.8680484	2.986326	1.5814978	1.8658523	1.1473522
Beta-tubulin, class I	7.5364776	1.0486828	1.0018606	1.411321	3.307786	3.0904756	4.762975	6.199554	2.4194784	1.2598992
Organic cation transporter 3	1.5530481	0.863211	1.0441613	1.0820467	1.5869146	1.0697105	1.6903596	1.8326881	1.5646762	1.8374114
Actin	1.9209703	0.84851015	1.1	1.8412498	2.7554574	2.2243008	2.7534175	3.9160047	2.007853	2.6451988
Cathepsin S	1.7622388	0.9778625	1.8618932	1.495594	1.595995	1.3345643	1.4216883	1.917645	1.574982	1.0647692
Biliverdin reductase	2.1722279	0.9535756	1.455543	1.4958446	1.4730015	1.7384639	1.0909885	2.4420905	1.7628571	1.8947373
Phase-1 RCT-164	2.338975	1.0210024	1.0160043	1.1351324	1.452622	1.2609577	1.6232723	2.010598	1.3780336	1.6100153
Phase-1 RCT-283	2.118387	1.0210024	1.0714947	1.5204513	2.0537834	1.5671482	1.5731025	2.5868476	1.4766525	2.2657673
Annexin V	2.1389198	1.0080514	1.011234	1.3028742	1.8915518	1.11335	1.852262	1.5578184	1.5176528	1.6017687
Complement factor 1 (CF1)	0.99180617	0.8722856	2.540002	1.8799496	1.5205309	1.4721345	2.193438	1.509181	0.9650207	1.0034931
Phase-1 RCT-276	1.1990963	0.97169738	1.0485999	1.4958686	1.229546	1.0908332	1.1332178	1.0749258	1.275336	1.1710844
Tyrosine aminotransferase	0.56063074	0.82706153	3.1817298	1.0932149	0.8350878	1.4043655	1.0637895	0.7728777	0.7339188	0.46596228
Glutathione peroxidase	0.42512748	0.82570004	1.7646337	1.8033992	1.2268484	1.1453148	1.593518	1.2073557	0.7640682	0.8976335
Histidine-rich glycoprotein	0.39078654	0.5261272	1.8534465	1.1621338	1.1294367	1.082238	1.4714172	0.78211695	0.9834159	0.8747972
Carbonic anhydrase III, sequence 2	0.36490268	0.5322517	1.7258665	1.0722268	1.294825	1.0555668	1.4046154	0.8563377	0.9160772	0.82482165
Phase-1 RCT-62	0.3863322	0.7169404	1.0037915	1.082541	1.0843551	0.98620104	0.9049836	0.788789	0.81615263	0.739392
Transitional endoplasmic reticulum ATPase	1.1979697	0.8448457	1.3247715	0.993288	1.367193	1.0257447	1.4501932	1.3989881	0.9594375	0.92073095
Phase-1 RCT-88	0.613948	0.8448457	0.7765777	0.8775956	0.7794887	1.019597	0.67294178	0.6086274	0.8764558	0.9594375
Phase-1 RCT-296	0.5299843	0.7765101	1.8634193	1.725418	1.850588	1.3680157	1.4364918	0.782825	0.68758947	0.9360928
Phase-1 RCT-161	0.6941131	0.96226344	0.7269683	0.8581153	0.581982	0.55372175	0.58576554	0.5000006	0.6987821	0.7092018
Glutathione S-transferase theta-1	0.7689509	0.88737893	1.4082462	1.5609367	1.3445275	1.6848217	1.3218473	1.5524569	1.3708122	1.20407
Phase-1 RCT-168	1.137991	1.2580643	0.7326004	0.83891624	1.1047555	1.016693	1.282398	1.2443494	0.7777888	0.74287184
Phase-1 RCT-182	0.42282712	0.8894735	1.3711076	1.175565	0.8345465	0.912715	1.1450249	1.0883445	0.53951234	0.5542165
JNK1 stress activated protein kinase	0.613389	0.7708849	0.3393904	0.7809303	0.5981026	0.7460544	0.5288778	0.5359073	0.690632	0.6918693
Phase-1 RCT-41	0.67784846	0.91916477	0.7906842	0.7622938	0.81346385	0.7978592	0.76928374	0.6909814	0.5668784	0.59706014
Phase-1 RCT-33	0.65665324	0.8617401	0.66685463	0.8914093	1.127336	1.2851826	1.1844625	1.1145512	0.64068325	0.695174
Phase-1 RCT-178	0.3014213	0.5761326	0.693501	0.4870389	0.4775397	0.41557818	0.4682516	1.4292703	0.60288927	0.524485
Apolipoprotein CIII	0.3710449	0.72895	0.72162753	0.72546693	0.5979898	0.5359038	0.506324	0.41012728	0.67018265	0.57814756
Phase-1 RCT-98	0.7471356	1.01673	0.7185122	0.637303	0.7663073	0.4391794	0.6690359	0.5883264	0.7998476	0.6463311
NADH-cytochrome b5 reductase	0.72389483	0.8610275	0.724902	1.1825792	0.8975655	1.0068137	1.1127805	0.9006701	0.57517207	0.55338857
Alpha 1 - inhibitor III	0.2397205	0.6872279	1.2896957	0.71351314	0.5971589	0.67598784	0.8393785	0.33621112	0.32445717	0.23587039
Phase-1 RCT-233	0.34284084	0.86012536	1.224637	1.0835211	0.78213096	0.9185147	0.8322601	0.71957654	0.6288094	0.6986351
Paraoxonase 1	0.27696814	0.7576053	1.5912638	1.0961878	0.8235985	0.8918986	1.0744874	0.68141544	0.4079569	0.456519
Presenilin-1	0.28180437	0.734044	1.2628208	0.7326231	0.58604254	0.6904338	0.7091009	0.35748687	0.35549942	0.26345146
Apolipoprotein C1	0.24671206	0.42056865	1.3161744	1.043584	0.7207988	0.65457207	1.2417547	0.9162873	0.265843	0.23532975
Cytochrome P450 2C23	0.42019176	1.0233607	1.6615431	1.7709253	0.7813204	1.2205002	1.0780877	0.90868375	0.31152707	0.4020347
Phase-1 RCT-227	0.21206807	0.58923215	1.1002557	1.1372662	0.8574865	0.6973003	0.82404774	0.55515736	0.6174007	0.64701458
Hepatic lipase	0.5998757	0.9077693	0.87277825	0.96665907	0.7284258	0.59258928	0.4671181	0.37862136	0.34710532	0.34739895
Phase-1 RCT-164	0.5855588	0.9788481	0.7171339	0.69978675	0.6459866	0.6484931	0.6598213	0.602217	0.43432474	0.68940187
Multidrug resistant protein-2	7.882569	1.0947547	1.2993512	1.3384098	2.065334	1.3610167	2.558346	2.5788336	2.6032633	2.177902
Insulin-like growth factor I, exon 6	0.38948234	0.6322887	0.73034	0.8322628	1.3104098	1.1713896	0.64520334	0.5859049	0.4232359	0.4303994
N-hydroxy-2-acetylfluorene sulfotransferase (ST1C1)	0.40183738	0.6020333	0.768992	0.8287827	0.8260713	0.70741128	0.76622419	0.51467285	0.26381676	0.3168412
Dynamin-1 (D100)	0.40425205	0.8880163	0.81031317	0.75971025	0.79374135	0.7240465	0.63931186	0.6468497	0.76306574	0.83257765
DNA polymerase beta	1.2253594	0.8659943	0.9315338	1.2928841	1.9650495	1.2949207	1.4625713	1.5028233	1.7077502	2.0049725

Table 30

Phase-1 RCT-173	1.507371	1.188338	0.96623325	1.2572962	1.3455532	1.6250732	1.2371801	1.4621053	1.689445	1.737861	1.8110774	1.2639678	1.0804424
Ubiquitin conjugating enzymes (RAD 6 homologue)	1.591105	1.5448654	0.9145531	0.9868877	1.5702314	0.84978455	0.98524064	1.1841255	1.5057485	1.8342779	1.1489016	1.4286754	1.3170702
Ribosomal protein L13A	1.8768426	0.86144503	1.2385345	1.9794277	2.3376884	2.0492268	2.5302038	2.839622	1.5913111	1.5741164	1.2573987	1.6661128	1.7518731
Phase-1 RCT-144	1.9486958	0.8812635	0.9922561	1.84157765	1.0370685	1.0904884	1.3288761	1.802399	1.3664309	1.3671884	1.1020281	1.4607508	1.2258268
C-Hase	1.6282377	0.9693331	1.0440084	1.1262826	1.3462113	1.3628825	1.2613238	1.3821982	1.2164484	1.1468691	0.89577505	1.1676828	1.9758268
Vesicular monoamine transporter (VMAT)	0.78787117	1.0494893	0.8479469	0.8402488	0.95785044	0.6637084	0.46701428	0.498615	0.80117248	0.83060116	1.16466574	0.8818421	0.87173154
Phase-1 RCT-273	0.86627335	0.95529433	0.8775444	0.8972048	0.87750498	0.8470081	0.7700087	0.7000047	1.1281288	1.0011867	1.1699876	0.8958306	0.8608908
Phase-1 RCT-230	1.8861274	1.0408	0.7059123	0.84818333	0.91628877	0.89313	0.8218711	0.8565831	1.2819513	1.2851515	1.4944278	1.9255115	1.4944278
Phase-1 RCT-74	0.8869141	1.1588323	0.9501515	0.5742397	0.6386253	0.6844882	0.8641822	0.57457834	1.0301616	0.8633379	0.9551011	1.0547237	0.8183822
Phase-1 RCT-80	0.9543284	1.0713425	0.6483582	0.6380784	0.7870014	0.63023174	0.43554463	0.5612245	1.059273	1.0559716	0.97329456	1.0053953	0.8012989
Phase-1 RCT-158	0.9758431	0.9511428	0.9265463	0.6818634	0.7870884	0.7529832	1.0230088	0.8502208	0.8020725	1.144532	0.97525287	1.865568	0.9468383
Deoxyribonuclease	0.86451	1.0587168	0.7620715	0.5806218	0.68172853	0.61988473	0.34880212	0.5711655	0.7904573	0.864273	1.3370477	1.1089149	1.0115371
Inositol polyphosphate multikinase (Ipmk)	0.7451444	1.0430666	0.6441521	0.6596714	0.6596714	0.7439488	0.569204	0.5955763	0.9011378	0.87741397	0.782112	0.90151323	0.6683113
Neuronal cell adhesion molecule (NCAM)	0.83358207	1.0555253	0.6842854	0.6593285	0.7772758	0.7072832	0.45074034	0.5985839	0.8978242	1.089159	0.8183883	1.3018903	1.3986085
Hepatocyte growth factor receptor	1.045844	1.2174791	0.920229	0.7826188	0.7712197	0.7979816	0.4683396	0.723038	0.82836548	0.7566286	0.8881713	1.3631207	1.0616171
Emby	0.9098725	1.2250528	0.6471151	0.55855143	0.5328374	0.5765868	0.3364018	0.4332038	0.892397	0.8586958	1.0308642	0.8900021	0.7728395
Dopamine receptor D2	0.8206008	0.92530495	0.86228193	0.7899554	0.78513124	0.84824777	0.71304214	0.82466514	1.4992208	1.4702804	1.4599029	0.8893318	1.1424544
Phase-1 RCT-51	0.8457855	1.0708249	0.88934155	0.678024	0.77816145	0.7489338	0.6307868	0.6865657	1.2183078	1.2886563	0.9325052	0.8973065	0.8000928
Four repeat ion channel	0.86815926	1.3549382	0.8472874	0.56671405	0.77440547	0.69370284	0.6824424	0.71885884	0.80079633	0.9218954	1.133552	0.8973065	0.8000928
Adrenomedullin	0.9230332	1.2685459	0.63811284	0.90575916	0.55023134	0.6133077	0.39859887	0.46005978	0.95770913	0.833945	0.9731725	0.9478319	0.8478158
Caveolin-3	0.8376306	1.1572807	0.6467688	0.8155982	0.62673205	0.6737735	0.52427465	0.588017	1	0.9217246	0.88372154	0.8788408	0.7857056
Phase-1 RCT-126	1.0106397	1.1123853	0.7885506	0.7001255	0.7085354	0.747048	0.5812881	0.585783	1.028943	1.0188408	0.95929738	1.20652	0.880181
Phase-1 RCT-94	0.8286809	1.0239693	0.8311808	0.93010247	0.7582871	0.7044307	0.71631444	0.705258	0.825883	0.88975203	0.94514394	0.9289547	0.9393936
Sarcoplasmic reticulum calcium ATPase	2.0113026	0.8068705	0.7824229	0.9424552	0.6858985	0.88255186	0.163311	0.6085284	0.95302814	0.8688388	0.94545513	0.73492056	0.70672154
Phase-1 RCT-78	0.85478526	0.9399273	0.7841274	0.8419409	0.88439727	0.88082548	0.75782956	0.8412958	1.124478	1.126078	0.9342993	0.80252934	0.8875293
Phase-1 RCT-252	0.7918413	1.0108788	1.9168501	0.8371725	0.6762851	2.1234803	0.864534	1.292238	1.5011842	1.4095145	1.1408878	0.8244244	0.80658926
Phase-1 RCT-151	1.0581519	0.9530891	1.1720148	0.86757666	1.4864817	1.269311	1.2120106	1.1973035	0.8893395	0.8081693	0.9125203	0.84916816	0.94916816
Phase-1 RCT-70	0.8635395	0.9829807	0.74289284	0.8947498	0.85411215	0.8802044	0.7092002	0.78762335	1.0376146	0.8958306	0.9724868	0.8898858	0.8777468
Phase-1 RCT-150	0.78534013	1.0336867	1.284356	0.7313847	0.923906	1.0821808	1.2355133	1.210639	0.7587837	0.8941354	0.788248	0.8903947	0.83461185
25-hydroxyvitamin D3-1 alpha-hydroxylase	1.16952	1.281523	0.7973659	0.6558125	0.765312	0.5783532	0.42888974	0.456473	0.8571884	1.870324	0.8916959	0.9728789	1.0032381
Phase-1 RCT-118	0.7887326	1.0457023	0.8258287	0.808334	1.1589331	0.7634378	0.74253570	0.69455704	1.4887924	1.4875872	1.1553714	0.5587616	0.8413982
Periodic 3-ketocyl-CoA thiolase 2	0.849499	1.0339568	1.0622956	0.9496638	1.8291631	1.8198564	1.8751009	1.4950338	1.0634986	1.8039863	0.86310463	1.0687073	1.0687073
Phase-1 RCT-146	3.0812671	1.1159716	0.8481375	1.321227	1.3249532	1.2868918	1.4085338	2.5591817	1.6007707	2.058257	1.205194	2.4925828	1.5479223
Superoxide dismutase Mn	1.507313	0.9103674	1.0319832	1.3219724	1.1208352	1.5360054	1.3189995	2.0105188	1.2443391	1.2937652	1.1762321	1.3985788	1.2478884
Phase-1 RCT-115	1.2587042	1.1444894	0.85597126	1.2209282	0.87982136	0.8690408	0.78437566	0.75804008	1.4288963	1.1537753	1.2686771	1.157562	1.5017886
Alpha-1 microglobulin/bikunin precursor (Amp)	0.4916705	0.8082636	1.2708362	0.9021991	0.902362	0.91053057	1.2360778	0.727644	0.46722135	0.46782655	0.642389	0.4786816	0.6586317
Phase-1 RCT-18	0.7488919	1.037955	0.7918398	0.8178812	0.81850475	0.84935087	0.8222867	0.7172881	0.94553598	0.9545005	1.0591601	0.85515183	0.803912
Masspin	0.7541835	1.0877615	0.84120587	0.6282127	0.6268826	0.59823763	0.39598693	0.4487847	0.69033414	0.72834886	0.833307	0.8766894	0.75985384
Decorin	0.8868403	1.0833269	0.8479135	0.73283375	1.3778708	0.9642736	0.7127738	0.75238897	1.4138385	3.522792	1.2063079	1.6891999	1.2463336
Retinol X receptor alpha	1.4697093	1.1377729	1.0746399	0.9865476	0.8387884	0.84863833	0.6073368	0.755566	1.8651752	1.5691164	1.168486	1.1117	1.3834036
Cellular nucleic acid binding protein (CHBP)	0.8996884	0.7738633	0.779902	1.042412	0.8597477	0.8334899	0.7273058	1.071808	1.1694745	1.487486	1.0042541	0.9115816	1.0701214
NADPH cytochrome P450 oxidoreductase	1.5184313	1.4717165	1.0553404	1.016581	1.161803	1.343847	0.778818	1.8203112	1.4831947	1.054203	1.2473122	1.3622375	1.5238445
Malic enzyme	0.95331237	0.7784307	0.62506723	0.57404035	0.5644006	0.83226575	0.52017725	0.6280115	0.84011288	0.86803097	0.9321312	0.8163867	0.7922252
Caspase 1	1.5186269	1.2150729	0.85851624	0.86847118	0.6873988	0.7158444	0.4823349	0.71697104	1.2988316	1.2507378	1.0787739	1.6487236	1.2783409
Cystatin C	1.135395	0.8870682	1.6611454	1.8873828	1.9346591	1.8024385	2.060085	1.8302889	1.4451475	1.7024032	1.142634	1.4454443	1.1321563
p53CDC	4.510624	1.0567381	1.2174088	2.2936576	1.5719229	1.5075492	0.85102403	2.416855	1.28513	1.2843177	1.4865244	5.307082	1.6167485
Poly(ADP-ribose) polymerase	1.8413532	1.2794269	1.0052885	1.049834	1.11052	1.2370495	1.0496869	1.603826	1.340558	1.387589	1.258521	1.4428783	1.3861331
Tissue plasminogen activator	1.8327658	1.0184875	0.7143318	0.86079576	1.2809117	1.3824277	1.6252385	1.6341877	1.0462886	1.1206319	1.0144689	1.6805104	1.2588134
Multidrug resistant protein-1	8.378539	1.1132727	1.4743623	1.3101763	2.0486535	1.5871942	1.4042009	3.4925525	2.4378831	1.7078879	2.2866101	6.283814	4.383073
Phase-1 RCT-187	2.1814718	1.2948979	0.86622785	0.84537413	1.1838687	1.1102388	1.2151528	1.7862506	1.4128148	1.194102	0.9898889	2.3183565	2.5111895
Phase-1 RCT-181	0.5787352	1.0483506	0.923472	0.9248904	1.0166757	0.82409056	0.901486	0.87488204	0.8162162	0.7986283	0.9294635	0.8316578	0.8316578
Gap junction membrane channel (protein beta 1 (Gbl))	0.5325597	1.4748339	0.9118174	0.98460886	1.2618301	0.9777702	0.93332875	0.8444183	0.50744724	0.86823213	0.47453895	0.8151804	0.8151804
Aquaporin-3 (AQP3)	0.74586284	0.98738085	0.71787685	0.6386088	0.7860717	0.71291435	0.7080642	0.621668	0.7851493	0.750188	0.8825231	0.775085	0.8545016
Myelin basic protein	1.2824867	1.1103352	1.9379131	1.2637707	1.268463	1.2774412	1.2606918	1.1161414	1.2039073	1.140462	0.9609097	1.277187	1.4331048
Calgranulin B5	1.3180927	1.072504	0.9780334	1.078988	1.2157287	1.1868388	1.0729957	1.4959016	1.2449272	1.1308128	0.8734225	1.1978152	1.1478324

Table 30

Phase-1 RCT-156	1.4924241	1.0020304	1.233008	1.28776	1.3806046	1.252535	1.8165472	1.4256925	1.0984148	0.99047506	1.0311408	1.1417353	1.2003998
Proenzyme activator 28 alpha	1.3592968	0.8579352	1.8207763	1.9690829	1.8763741	1.8336874	2.453395	2.8774223	1.1797338	1.2408711	1.3982554	1.1851022	1.2980016
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).													
(2) Compound and dose abbreviations as in Table 1													
(3) Individual animal number													
(4) Liver inflammation classification for compound dose group at 72 h: yes-necr, necrosis observed; yes-both, necrosis with inflammation observed; no, no histopathology observed													
(5) Predictive genes (as in Table 23 and as included in Table 26)													

Table 30

Table 30. Expression Data for 72 Hour Timepoint (1)					
Compound/Dose (2)	DMN 20	LPS 8	LPS 8	LPS 8	
Animal Number (3)	yes-both	yes-both	yes-both	yes-both	358
Liver Toxicity Inflammation Classification (4)					
Gene Name (5)					
Phase-1 RCT-107	0.8040168	0.7016642			0.6188124
Betaine homocysteine methyltransferase (BHMT)	0.086841946	0.8906168	0.071252525		
Proliferating cell nuclear antigen gene	2.1440887	1.3109872	1.1931351		
Cytochrome P450 2D18	0.41523027	1.3379599	0.50334036		
Cytochrome P450 2C11	0.13191731	0.51018816	0.29983737		
Phase-1 RCT-280	0.29790922	0.7738295	0.41148566		
Phase-1 RCT-69	2.5527768	0.7245623	1.2713593		
Beta-actin, sequence 2	2.8687517	1.3027158	1.8715602		
Phase-1 RCT-292	0.8359251	1.0147758	1.0631226		
Private kinase, muscle	4.7186656	0.63391197	1.7183726		
Osteocalcin	7.710653	1.6118702	1.4074453		
Calgranulin B1	2.2252955	0.8945987	1.6380981		
Apolipoprotein AII	0.11109598	0.76885235	0.28235635		
Connexin-32	0.57068235	0.71284984	1.738875		
Phase-1 RCT-109	1.726422	1.231006	2.0403097		
Glycine methyltransferase	0.3782954	1.2850665	0.14329652		
Lipidic-glycerol-lactone oxidase	0.18345439	0.7619083	0.1880563		
Phase-1 RCT-296	0.3859828	0.80252784	0.26157707		
Carbonic anhydrase III	0.089831198	0.5609542	0.018577862		
Phase-1 RCT-78	0.5944242	0.837193	0.3211214		
Urinary protein 2 precursor	0.14013028	0.9006414	0.3211214		
Insulin-like growth factor I	0.31306607	0.82295676	0.43861848		
Ap1 sulfotransferase	0.34340733	0.83986924	0.357251		
Phase-1 RCT-185	0.45994687	1.0325785	0.2306643		
Cottlin	2.1952417	1.2885987	0.8125472		
Statmin	2.1910366	1.3550336	1.248386		
60S ribosomal protein L6	1.828529	1.4829028	1.3535442		
Calpactin I heavy chain	3.843169	1.0598586	1.9322118		
Collagen type II	2.112729	1.7454416	1.0433245		
Phase-1 RCT-179	2.23797	1.2718953	1.1947907		
Voltage-dependent anion channel 2 (Vdac2)	2.2102814	1.1508647	1.0590435		
Phase-1 RCT-192	1.9038297	1.2221013	1.1908112		
Adenine nucleotide translocator 1	1.0003195	1.0828714	0.81800365		
Thymosin beta-10	4.5385753	1.6212133	2.4276903		
High affinity IgE receptor gamma chain (FcER1gamma)	3.1394486	1.6383187	1.4425371		
Gamma-actin, cytoplasmic	2.5319722	1.2823808	2.0532982		
Uncoupling protein 2	5.763337	1.898482	1.3210982		
Phase-1 RCT-34	1.0498437	1.2086354	0.5718185		
Phase-1 RCT-31	0.7166233	1.1030268	0.30396357		
Cyclin D1	1.8715975	1.0256747	0.8498021		
IgE binding protein	6.547444	1.4251382	3.767226		
Zinc finger protein	1.6320338	0.87200236	0.93095844		
Phase-1 RCT-138	2.8452522	1.3631668	1.0008943		
Alpha-tubulin	3.4716638	1.0500966	1.1086114		
Alpha-prothymosin	2.0055177	1.2273427	0.36883088		
Calpain 2	1.87289	1.2158599	1.1343175		
Phase-1 RCT-12	2.007208	0.9099266	1.0985059		
Cathepsin B	1.8117498	1.3868065	1.767509		
Phase-1 RCT-24	2.530043	1.070531	0.9617021		
Melanoma-associated antigen ME491	3.3786554	0.84295285	2.057486		

Table 30

Phase-1 RCT-68	1.8556231	1.2202263	2.1922286
Cyclin G	3.9989164	1.2756402	2.2041815
Hypoxanthine-guanine phosphoribosyltransferase	1.2631109	1.1326075	1.0975076
Tissue inhibitor of metalloproteinases-1			
ID-1	3.128998	2.8370152	10.385122
Ribosomal protein S9	1.6305699	1.3253391	1.0344073
Heme oxygenase	1.9823402	1.3917873	1.2909693
Ribosomal protein S6	5.313715	1.2870158	3.4576108
Ribosomal protein S17	1.7991846	1.397509	1.5123247
Nucleoside diphosphate kinase beta isoform	1.3569356	1.3693387	1.7069891
Phase-1 RCT-121	1.9797003	0.9680903	1.2260166
14-3-3 zeta	3.9615777	1.4953027	1.0293612
60S ribosomal protein L8 (alternata clone 1)	3.075995	1.1444138	1.4321153
Beta-tubulin, class I	1.6800777	1.2683167	1.5378393
Organic cation transporter 3	2.6551533	0.8950228	0.81103364
Beta-actin	1.6919669	0.7431803	1.1867591
Cathepsin S	6.2669044	1.5399238	1.4478053
Biliverdin reductase	3.2793078	1.3528031	1.0394243
Phase-1 RCT-154	2.533243	1.4140321	0.9248817
Phase-1 RCT-283	2.1739683	0.93116295	1.3778303
Anectin V	4.982032	1.3600008	1.6220219
Complement factor I (CFI)	2.380982	1.3544004	1.0370871
Phase-1 RCT-278	0.99775934	1.8933793	0.9262998
Tyrosine aminotransferase	0.93278664	1.2831049	0.6957418
Glutathione peroxidase	0.3148907	0.980077	1.6594581
Hedidine-rich glycoprotein	0.6918331	1.9804517	0.31715548
Carbonic anhydrase III, sequence 2	0.623878	1.3151786	0.14718106
Phase-1 RCT-462	0.5131549	1.3646503	0.10409765
Transitional endoplasmic reticulum ATPase	0.45668544	1.0562036	0.1947956
Phase-1 RCT-88	0.86054945	1.075758	1.0174806
Phase-1 RCT-286	0.7942439	1.207669	0.5325862
Phase-1 RCT-161	0.60530573	2.484485	0.09823714
Glutathione S-transferase theta-1	0.4366275	0.7765538	0.2438344
Phase-1 RCT-168	1.1165882	1.3185403	0.93906176
Phase-1 RCT-182	0.84091843	1.0274748	0.5856489
JNK1 stress activated protein kinase	0.3478536	1.306448	0.35697815
Phase-1 RCT-61	0.5406055	0.8911144	0.6492018
Phase-1 RCT-33	0.7177912	1.0545126	0.728508
Phase-1 RCT-178	0.497881	0.7818755	0.2524734
Apolipoprotein CIII	0.5607463	0.7301234	1.3281302
Phase-1 RCT-46	0.3569416	1.0805021	1.1166836
NADH-cytochrome b5 reductase	0.79081464	0.9031604	0.75090295
Alpha 1 - inhibitor III	0.42171198	0.9730204	0.47377768
Phase-1 RCT-233	0.2456891	0.9253855	0.4250093
Paraoxonase 1	0.42334568	1.1635805	0.20704383
Presenilin-1	0.21882187	1.3272403	0.13670273
Apolipoprotein C1	0.24058105	1.0025127	0.41695938
Cytochrome P450 2C23	0.42162268	1.6954692	0.173472
Phase-1 RCT-227	0.43124133	0.77878546	0.29532373
Hepatic lipase	0.2475416	0.87250113	0.49930256
Phase-1 RCT-164	0.72538185	0.89859015	0.65953374
Multidrug resistant protein-2	3.5761097	1.8914113	1.0693528
Insulin-like growth factor 1, exon 6	0.34395814	0.95938844	0.6595183
N-hydroxy-2-acetylaminofluorene sulfotransferase (ST1C1)	0.33320472	0.63301605	0.06586355
Dynamin-1 (D100)	0.74161947	0.9502544	0.69332047
DNA polymerase beta	1.1561971	0.9621877	1.040839

Table 30

Phase-1 RCT-173	1.2427564	0.8998468	1.1152853
Ubiquitin conjugating enzyme (RAD 6 homologue)	1.6028064	1.06924	1.1566948
Ribosomal protein L13A	1.9462317	1.3632537	2.2470295
Phase-1 RCT-144	1.2983861	1.1453851	1.3175316
α-H-ras	1.502581	1.2523831	1.530816
Vesicular monoamine transporter (VMAT)	0.8883549	0.47463155	1.849659
Phase-1 RCT-273	0.99483957	0.41823173	0.94441444
Phase-1 RCT-290	2.4951176	0.6108781	1.4854684
Phase-1 RCT-74	0.8784185	0.7886209	1.255345
Phase-1 RCT-80	0.84548587	0.4444107	1.0730352
Phase-1 RCT-158	1.5875775	0.9016394	1.2018623
Deoxyribidylase	0.96194685	0.7705581	1.4161179
Inositol polyphosphate multikinase (Ipmlk)	0.62240355	0.44881448	0.5744744
Neuronal cell adhesion molecule (NCAM)	1.2564245	0.45160484	0.8269709
Hepatocyte growth factor receptor	1.180072	1.1191892	1
Empty	0.8991991	0.6028172	1.1242586
Dopamine receptor D2	1.0226764	0.94019413	0.74451745
Phase-1 RCT-51	1.0109782	0.897611	0.79182405
Four repeat ion channel	0.84958834	1.050205	0.95182323
Adrenomedullin	0.8552592	0.5860319	1.5350603
Carvedin-3	0.7708271	0.8325261	0.8653857
Phase-1 RCT-128	1.2017422	0.7223974	1.475175
Phase-1 RCT-84	1.0000972	1.0265609	1.2811085
Sarcoplasmic reticulum calcium ATPase	0.7748615	0.8541117	1.3511043
Phase-1 RCT-79	0.7963578	0.7212599	0.95881455
Phase-1 RCT-252	0.34884637	0.9355968	0.38855828
Phase-1 RCT-151	0.8519434	1.0378699	1.2836052
Phase-1 RCT-70	0.87584794	0.89695007	0.9826868
Phase-1 RCT-150	0.7189278	1.2268874	0.8404482
2S-hydroxyvitamin D3-1 alpha-hydroxylase	1.0930347	1.0019239	1.36636
Phase-1 RCT-119	0.38743204	0.70738745	0.8578916
Peroxisomal 3-oxoacyl-CoA thiolase 2	0.8431568	0.9428355	0.8813462
Phase-1 RCT-146	1.8992155	1.098418	1.2703335
Superoxide dismutase Mn	1.3590895	1.2316445	0.8860071
Phase-1 RCT-115	2.7409308	0.5290255	1.2857474
Alpha-1 microglobulin/bikunin precursor (Ambp)	0.4586953	1.2435149	0.71594733
Phase-1 RCT-18	0.8337812	0.9628638	0.92332304
Masspin	0.7277598	0.4918198	1.738742
Decorin	1.7129465	0.6102011	1.5485382
Retinoid X receptor alpha	1.1658712	1.1044623	0.8462545
Cellular nucleic acid binding protein (CNBP)	0.85817003	1.0558684	0.98325785
NADPH cytochrome P450 oxidoreductase	1.3678231	0.8422467	0.9032656
Malic enzyme	0.7036386	0.8978055	0.72347285
Caspase 1	1.9639709	1.1267234	1.122003
Cystatin C	1.7174932	0.8600019	0.5145815
p55CDC	1.9818262	1.1542108	2.3778481
Poly(ADP-ribose) polymerase	1.5267507	1.0924722	1.1388742
Tissue plasminogen activator	1.4500462	0.9207945	1.0872881
Multidrug resistant protein-1	3.7182	2.0160375	0.9582012
Phase-1 RCT-207	2.3214073	0.8915475	1.0947728
Phase-1 RCT-181	0.8738912	1.284629	0.9488184
Gap junction membrane channel protein beta 1 (Gjb1)	0.87613164	0.96224865	0.54281425
Aquaporin-3 (AQP3)	0.76584807	1.0010186	1.1204946
Myelin basic protein	1.3968417	0.8241988	0.81628623
Calgranulin B3	1.0920181	0.90243614	1.0931168

Table 30

Phase-1 RCT-156	1.3465308	1.0327852	0.9664631
Protease activator 28 alpha	1.4628532	0.97415274	1.308264
(1) Gene expression data for 72 hour timepoint are presented as mean ratio of treatment/control for all 72 hour predictive genes (Table 23).			
(2) Compound and dose abbreviations as in Table 1.			
(3) Individual animal number			
(4) Liver inflammation classification for compound dose group at 72 h: yes-necr. necrosis observed; yes-bom, necrosis with inflammation observed; no, no histopathology observed			
(5) Predictive gene (as in Table 23 and as included in Table 25)			

Table 30